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## 1.1 COLBERT FACILITY INFORMATION SUMMARY

<b>SITE:</b>	Colbert Landfill, Colbert WA (SE ¼ SE ¼, Section 3, Township 27 north, Range 43 east)
<b>REPORTING PERIOD:</b>	January 1, 2004 through March 31, 2004.
<b>REGULATORY AUTHORITY:</b>	Washington State Department of Ecology, EPA Scope of work for Remedial Action as stated in the consent decree.
<b>TECHNOLOGY:</b>	Pump and treat extraction system using above ground airstripping tower
<b>CONSTITUENTS OF CONCERN:</b>	1,1,1-Trichloroethane (TCA), 1,1-Dichloroethane (DCA), 1,1-Dichloroethene (DCE), Trichloroethene (TCE), Tetrachloroethane (PCE), Methylene Chloride (MC)
<b>CRITERIA:</b>	Criteria were established as stated in the Consent Decree. See Table 1-1.
<b>SAMPLING PROGRAMS:</b>	<u>RA compliance and NPDES monitoring</u> - Sampling done in accordance with SAP as stated in the <i>Colbert Landfill Operations and Maintenance Manual, 1998</i> . <u>Domestic well sampling</u> - Sampling done in accordance with the Colbert residential <i>Quality Assurance and Field Sampling Plan, 1991</i> . See Figure 1-1 for well locations. See Table 1-2 for well designations and Table 1-3 sampling schedule.
<b>FACILITY STARTUP</b>	May 18, 1994
<b>RESULTS:</b>	Total volume of water treated to date is 4098 million gallons. Total mass of constituent of concern contaminants removed from influent to date is 9391 lbs. The effluent from the facility has achieved all applicable criteria since facility startup. The south system (upper aquifer) extraction wells have achieved shutdown/standby status during this reporting period.

**Table 1-1 Colbert Landfill Remedial Action Regulatory Criteria**

CRITERIA	(ug/L)						(mg/L)									
	TCA	DCE	DCA	TCE	PCE	MC	Cl	Fe	Mn	Zn	TOC	COD	SO4	NO2+NO3	TP	
Criteria to be achieved for completion of RA	<b>Performance</b>															
	200	7	4050	5	0.7	2.5										
Criteria to be achieved in monitoring wells during RA operation	<b>Evaluation</b>															
	200	7	4050	5	7	25										
If exceeded, an adjustment to interception system is needed	<b>Operational Control</b>															
	South	33	NA	610	NA											
	West	31	NA	610	NA											
If exceeded, a modification to interception system is needed	<b>Adjustment Control</b>															
	South	103	4.5	2026	3.3											
	West	101	4.5	2026	3.3											
Monthly sampling initiated, evaluated in 12 months Exceedance requires alternative drinking water source be supplied	<b>Domestic</b>															
	Action Level	130	4.55	2632	3.25	0.5	1.63									
	MCL	200	7	4050	5	0.7	2.5									
NPDES																
	Monthly Maximum Daily		7	4050	5	7	25	230	0.3	0.05						0.93
MFS																
			7	4050	5	7	25	250	0.3	0.05	5	NA	NA	250	10	NO3



**Table 1-2 Colbert Landfill Well Designations**

<b>WELL ID</b>	<b>AQUIFER</b>	<b>DESIGNATION</b>	<b>MONITORING PROGRAM</b>
CD-31A1	upper	Downgradient	Compliance
CD-34A1	upper	Outboard	Compliance
CD-36A1	upper	Downgradient	Compliance
CD-37A1	upper	Downgradient	Compliance
CD-38A1	upper	Downgradient	Compliance
CP-S3	upper	Outboard	Compliance
CD-41C1	lower	Set A	Compliance
CD-41C2	lower	Set A	Compliance
CD-41C3	lower	Set A	Compliance
CD-42C1	lower	Set A	Compliance
CD-42C2	lower	Set A	Compliance
CD-42C3	lower	Set A	Compliance
CD-43C1	lower	Set B	Compliance
CD-43C2	lower	Set B	Compliance
CD-43C3	lower	Set B	Compliance
CD-44C1	lower	Set B	Compliance
CD-44C2	lower	Set B	Compliance
CD-44C3	lower	Set B	Compliance
CD-45C1	lower	Outboard	Compliance
CD-45C2	lower	Outboard	Compliance
CD-45C3	lower	Outboard	Compliance
CD-48C1	lower	Set A/Outboard	Compliance
CD-48C2	lower	Set A/ Outboard/MFS	Compliance/MFS
CD-48C3	lower	Set A/Outboard	Compliance
CD-03A1	upper	MFS	MFS
CD-60A1	upper	MFS	MFS
CD-61A1	upper	MFS	MFS
CS-04A1	upper	MFS	MFS
CP-S1	upper	Extraction	Compliance
CP-S4	upper	Extraction	Compliance
CP-S5	upper	Extraction	Compliance
CP-S6	upper	Extraction	Compliance
CP-E1	lower	Extraction	Compliance
CP-E2	lower	Extraction	Compliance/MFS
CP-E3	lower	Extraction	Compliance
CP-W1	lower	Extraction	Compliance
CP-W2	lower	Extraction	Compliance
CP-W3	lower	Extraction	Compliance

**Table 1-3 Colbert Landfill Sampling Schedule**

Parameters and Method	Compliance Wells		NPDES		MFS Wells	
	Monitoring	Extraction	Influent	Effluent	Upper	Lower
VOC'S EPA 524.2	Annual	Quarterly	Monthly	Monthly	Annual	
Chloride EPA 300.0				Quarterly	Annual	Quarterly for first two years
NO3 + NO2 EPA 535.3				<del>January</del> , May, June, July		
Total Phosphorus EPA 365.3				<del>January</del> , May, June, July		
NO2/NO3/NH3 EPA 300.0/354.1/ 350.1					Annual	Quarterly for first 2 years
SO4/TOC/COD EPA 300.0/415.1/ 410.1					Annual	Quarterly for first 2 years
Fe, Mn EPA 6010				Quarterly	Annual	Quarterly for first 2 years
Zn EPA 6010					Annual	Quarterly for first 2 years
Toxicity				<del>Semi-Annual</del>		

## 2.1 PERFORMANCE DATA

### 2.1.1 FIELD DATA

#### UPPER AQUIFER

Field parameters for this reporting period are shown in Table 2-1. Extraction well CP-S4 had the highest conductivity found in the upper aquifer extraction wells. The pH readings taken in upper aquifer wells ranged from 7.2 to 7.3. Groundwater elevations in the upper aquifer wells upgradient from the extraction wells decreased while elevations in wells near the extraction wells remained relatively consistent (Figure 2-1). Upper aquifer groundwater elevation contours and flow paths are presented in Figure 2-2.

#### LOWER AQUIFER

Lower aquifer extraction well field parameters are presented in Table 2-1. East system extraction wells exhibit higher conductivities and lower pH values than the west system extraction wells. Extraction well CP-E2 had the highest conductivity at 1138 umhos/cm. Extraction well CP-W2 had the lowest conductivity at 412 umhos/cm. In general, groundwater elevations in the lower aquifer remained consistent when compared with the previous quarter (Figure 2-3). Figure 2-4 presents lower aquifer groundwater elevation contours and flow paths.

#### INFLUENT/EFFLUENT

Influent and effluent quarterly field parameters are presented in Figure 2-5 and Figure 2-6.

### 2.1.2 CRITERIA EXCEEDANCES

#### UPPER AQUIFER

All south system extraction wells had constituent of concern concentrations below evaluation criteria. Extraction well CP-S4 had a TCE concentration slightly below the adjustment control criteria during this reporting period. All domestic wells sampled during this reporting period were below applicable criteria as well.

#### LOWER AQUIFER

Extraction wells CP-E1, CP-E2, CP-E3, CP-W2 and CP-W3 had DCE concentrations above the evaluation criteria (Table 2-2). Extraction wells CP-E1, CP-E2 and CP-W3 had TCE concentrations above the evaluation criteria as well. Wells in the domestic sampling program sampled during this reporting period were below applicable criteria.

#### INFLUENT/EFFLUENT

Influent samples taken this reporting period exceeded the evaluation criteria for DCE and TCE (Table 2-2). There were no effluent criteria exceedances. The manganese concentration found in the effluent sample was at the highest observed since facility start-up, but was still well below NPDES requirements.

### 2.1.3 CHEMICAL DATA

#### UPPER AQUIFER

Constituent of concern concentrations at the south system extraction wells were consistent with the previous quarters (Table 2-3, Figure 2-7 and Figure 2-8). Compliance monitoring well CP-S3 was sampled during this quarter to continue observing the MC concentrations present in this well. Since no other constituents were found in this well and historically there has been no MC detected in the upper aquifer, the source of MC does not appear to be attributable to the landfill. Selected upper aquifer domestic wells TCA and DCE concentrations versus time are presented in Figure 2-9. Upper aquifer TCA plume boundaries for the first quarter 2004 are shown in Figure 2-10.

#### LOWER AQUIFER

Constituent of concern concentrations in both the west and east system extraction wells were relatively consistent with previous quarter findings ( Figure 2-11 through Figure 2-14). Domestic wells in the lower aquifer show TCA levels consistent with previous quarters and are well below the applicable criteria (Figure 2-15). Lower aquifer TCA plume boundaries for this reporting period are shown in Figure 2-16.

#### INFLUENT/EFFLUENT

VOC concentrations found in the influent are presented in Figure 2-17. Overall TCA concentrations in the influent indicate a decreasing trend. Additional VOC analytes detected in the influent include CFC-12, chloroform, cis-1,2-DCE, and trichlorofluoromethane. There were no VOC's detected in the effluent. Biomonitoring was performed during this quarter. Results from this test indicate that the treated groundwater discharged to the Little Spokane River is unlikely to have any measurable effect on freshwater organisms in the river. No significant physical or chemical changes were detected in the effluent that would suggest a change in the toxicity of the treated groundwater to the biota of the receiving waters.

### 2.1.4 MASS REMOVAL

Since facility startup, an approximate 4098 million gallons of water have been treated through the airstripping tower (Figure 2-18). A total of 54 pounds of constituent of concern contaminants were removed from the 78.8 million gallons treated during this reporting period. Last quarter, 64 pounds of constituent of concern contaminants were removed from a total of 89.3 million gallons of water treated.

Extraction well CP-W2 contributed the greatest volume of water and well CP-W3 contributed the great mass of constituents received at the facility during this reporting period when compared to the other extraction wells (Figure 2-19). CP-E1 had the highest mass of constituent removed relative to the volume of groundwater it contributed.

**Table 2-1 Colbert Landfill Quarterly Monitoring Well Field Parameters**

<b>StationID</b>	<b>SampleDate</b>	<b>FieldTemp</b>	<b>FieldPH</b>	<b>FieldConductivity</b>	<b>FieldTurbidity</b>	<b>Aquifer</b>
CP-E1	1/14/04	11.1	6.8	727	0.15	lower
CP-E2	1/14/04	12.1	6.9	1138	0.13	lower
CP-E3	1/14/04	10.9	6.9	641	0.11	lower
CP-W1	1/14/04	11.2	7.5	516	0.17	lower
CP-W2	1/14/04	9.9	7.4	412	0.38	lower
CP-W3	1/14/04	10.9	7.3	547	0.17	lower
CP-S1	1/14/04	10.1	7.3	715	0.19	upper
CP-S3	1/14/04	9.3	7.2	581	26.2	upper
CP-S4	1/14/04	11.4	7.2	719	0.23	upper
CP-S5	1/14/04	9.8	7.3	631	0.26	upper
CP-S6	1/14/04	9.1	7.2	651	64.1	upper

Figure 2-1 Upper Aquifer Groundwater Elevations

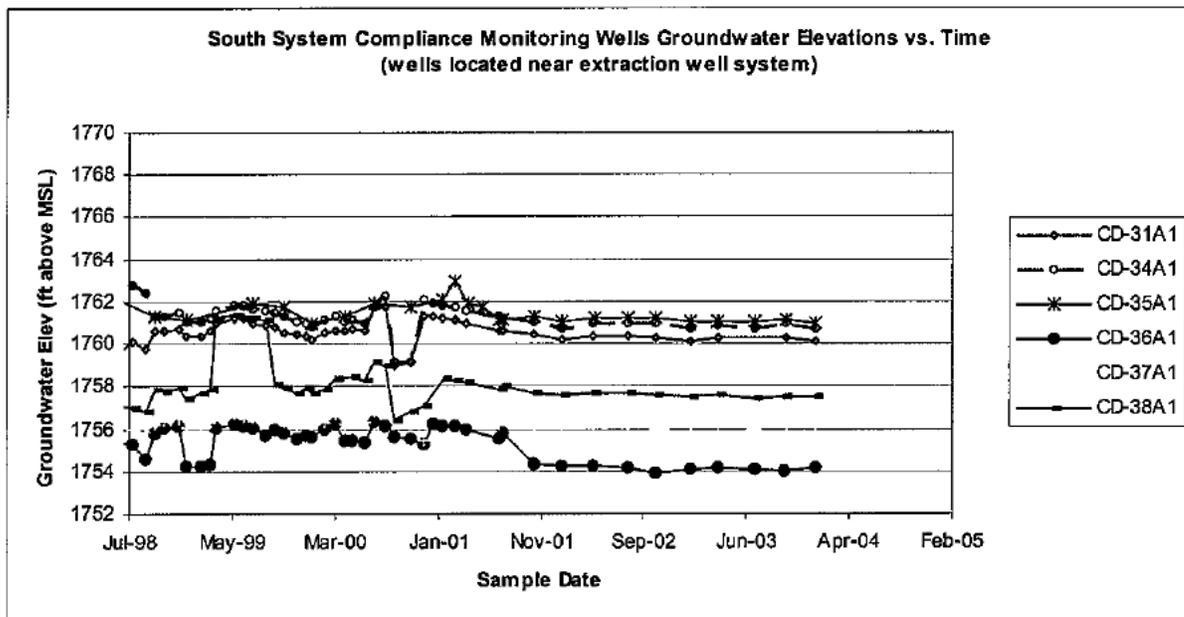
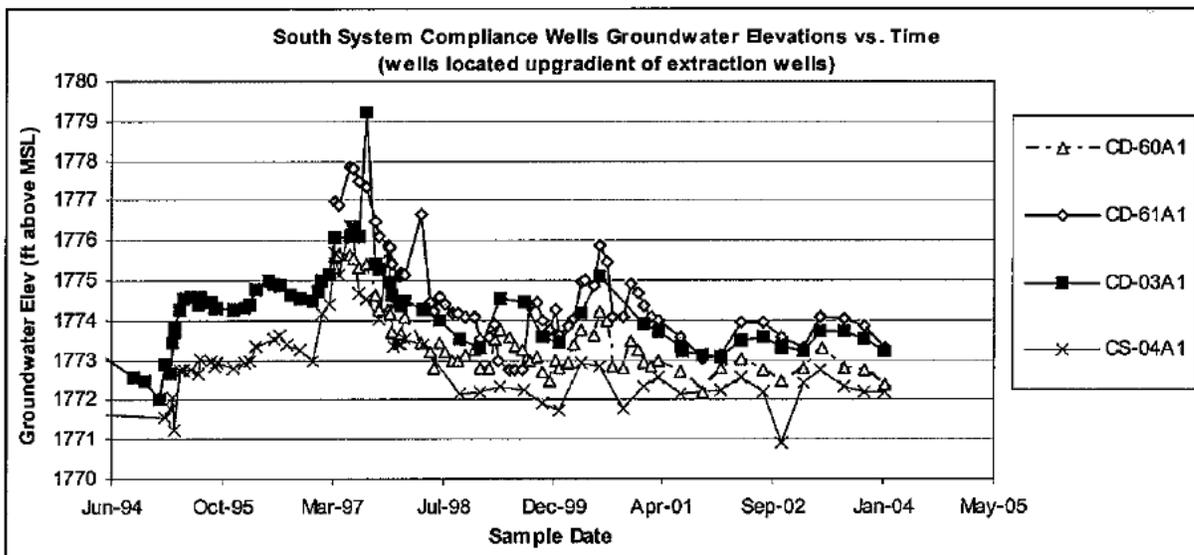
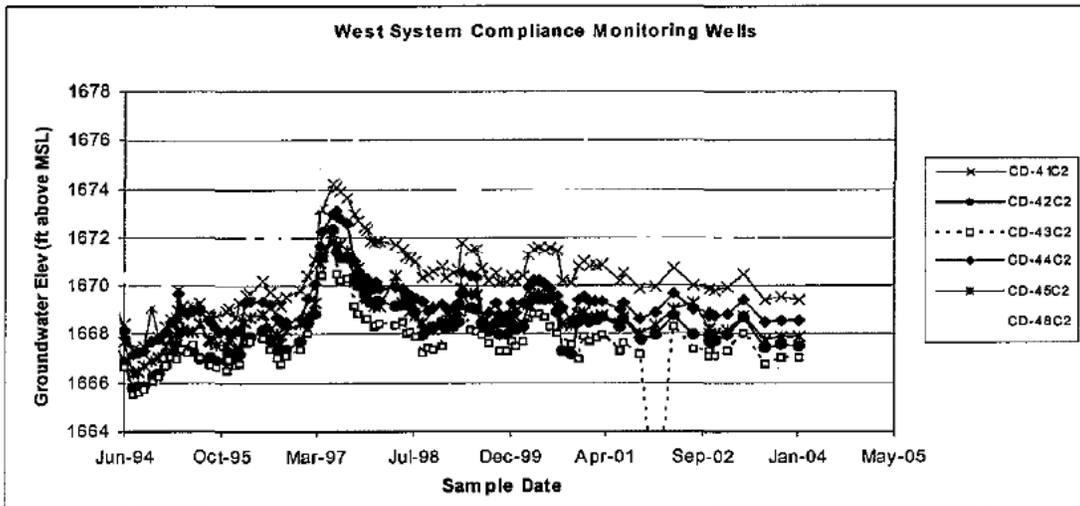
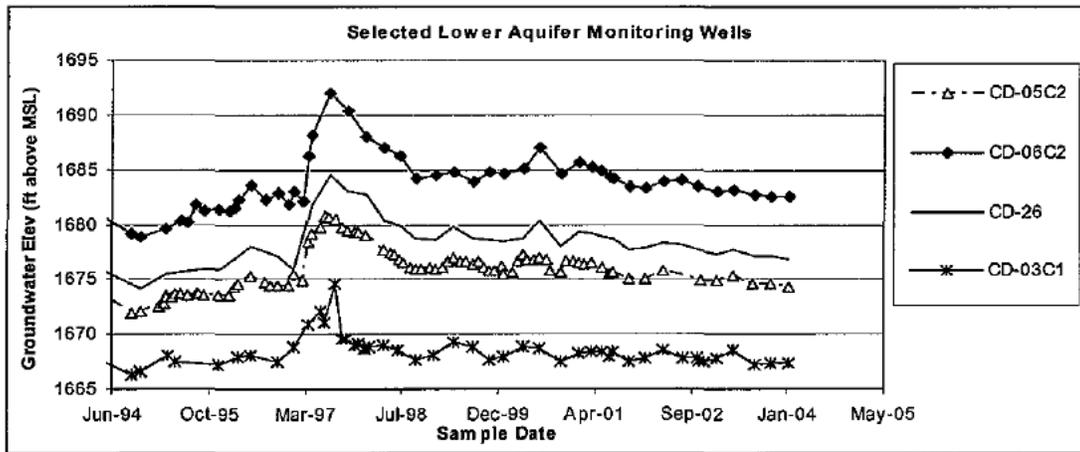
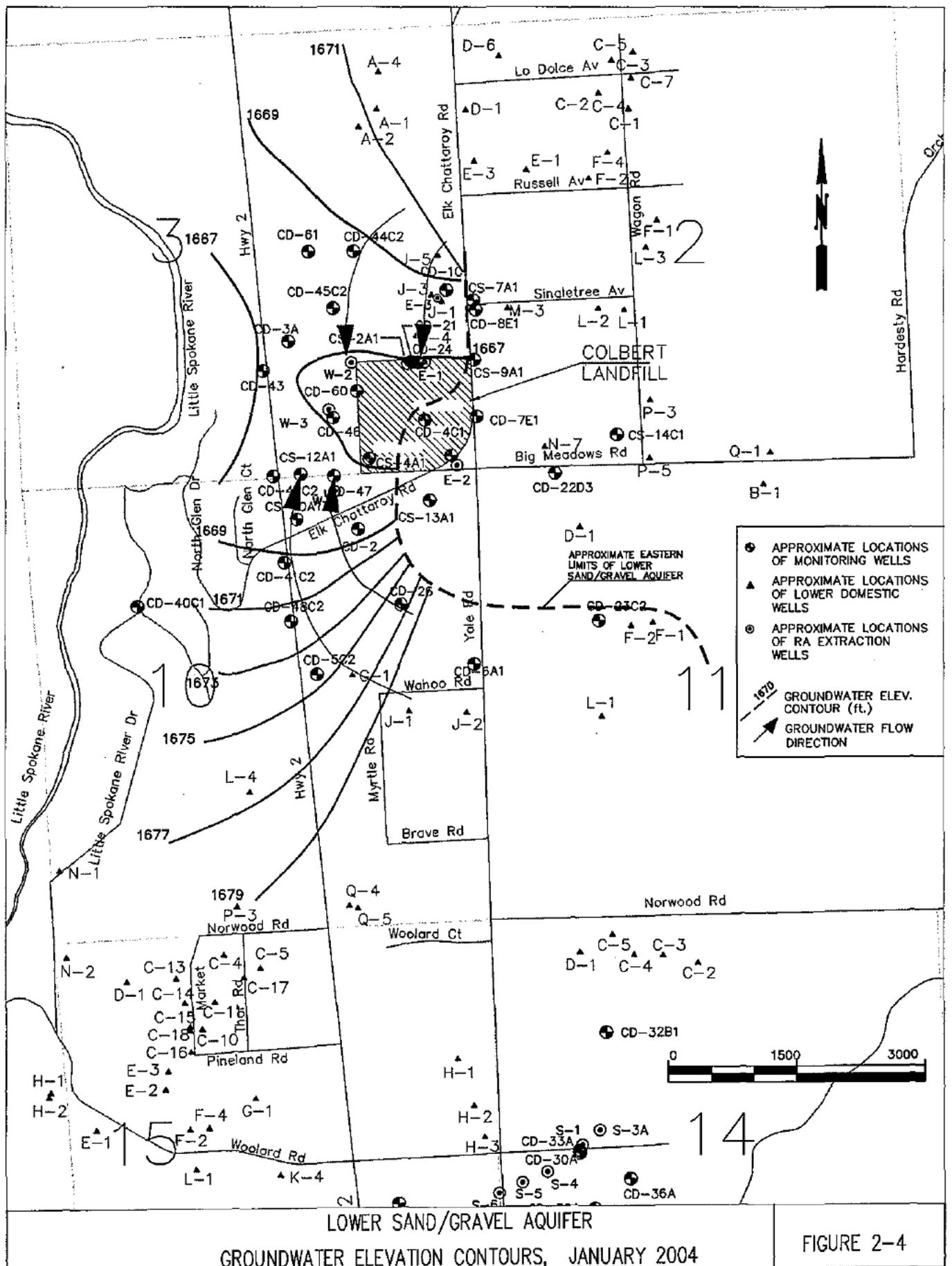




Figure 2-3 Lower Aquifer Groundwater Elevations vs. Time





- APPROXIMATE LOCATIONS OF MONITORING WELLS
- ▲ APPROXIMATE LOCATIONS OF LOWER DOMESTIC WELLS
- ⊙ APPROXIMATE LOCATIONS OF RA EXTRACTION WELLS
- 1970 GROUNDWATER ELEV. CONTOUR (ft.)
- GROUNDWATER FLOW DIRECTION



**Figure 2-5 Influent Field Parameters**

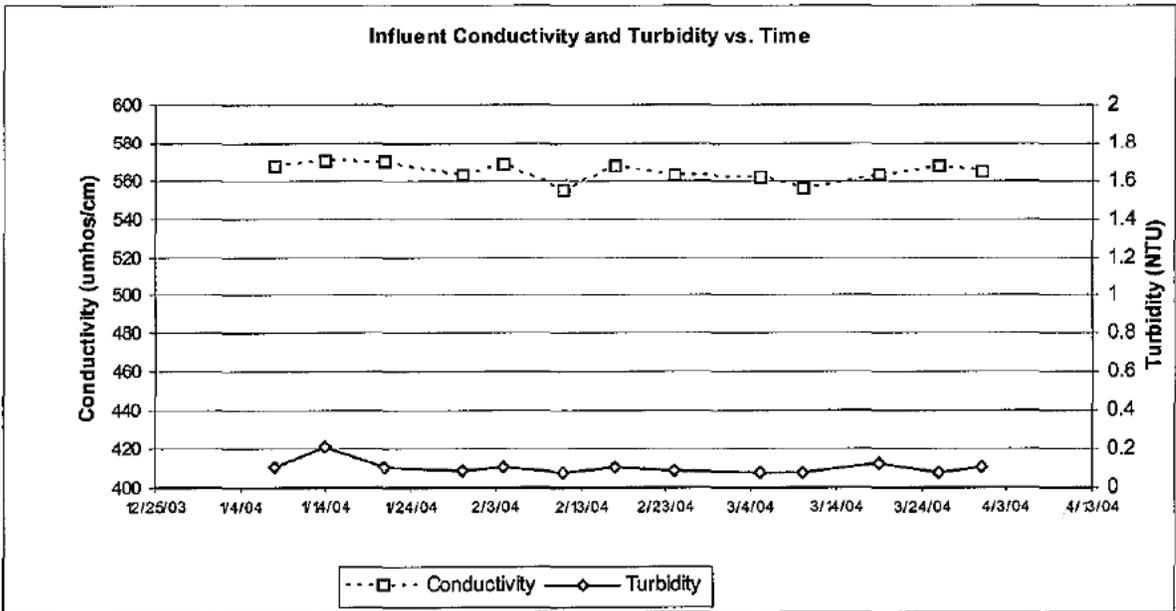
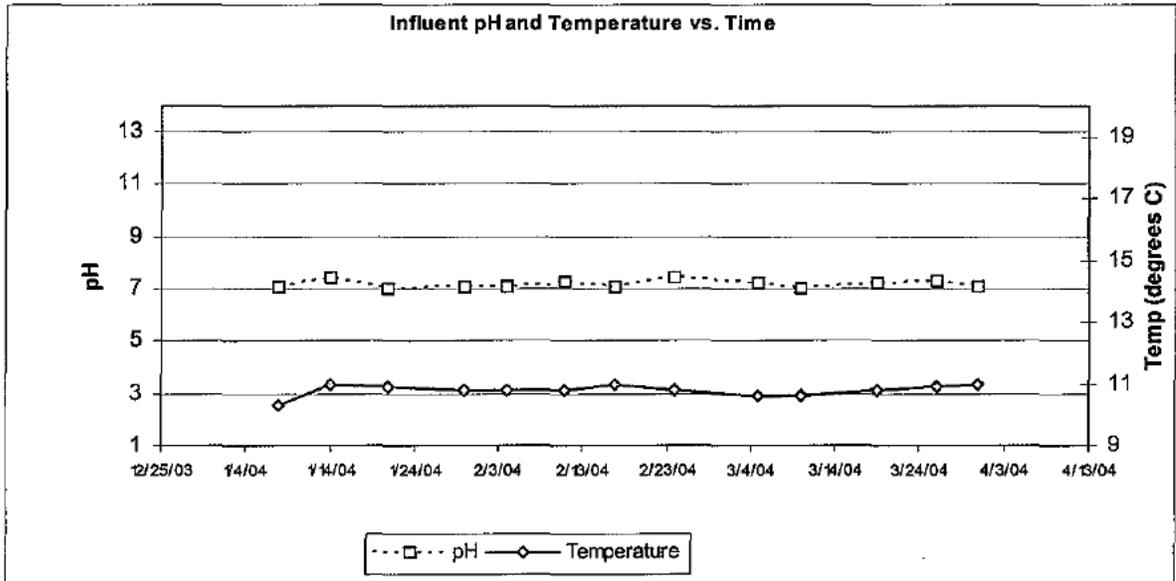
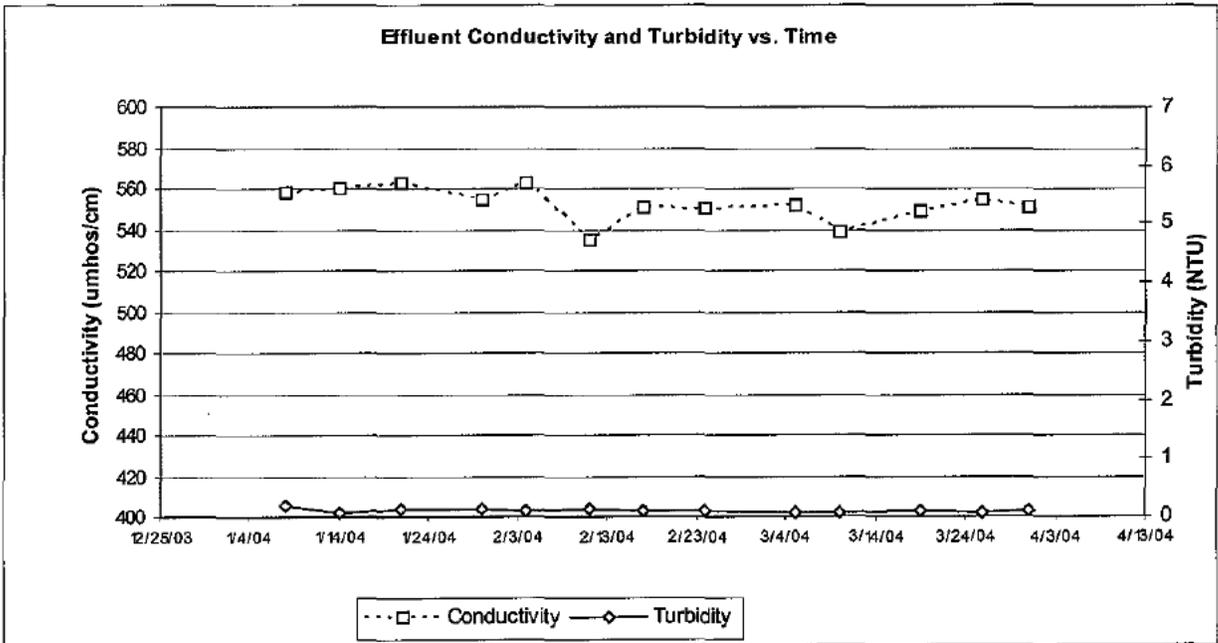
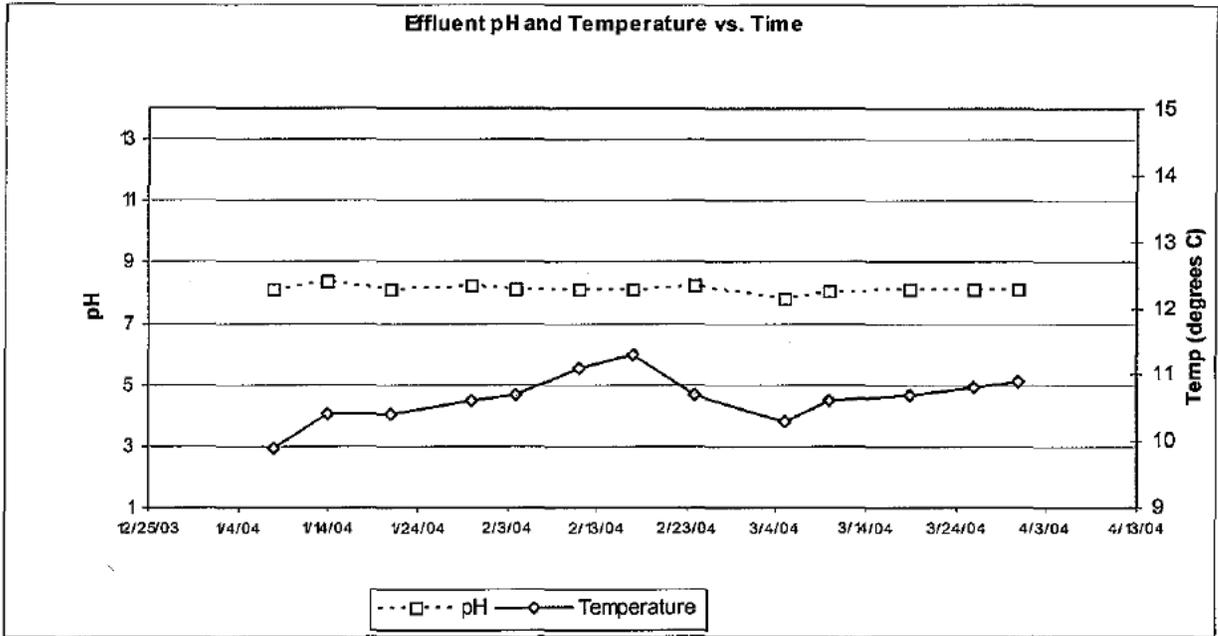


Figure 2-6 Effluent Field Parameters



**Table 2-2 Evaluation Criteria Exceeded**

StationID	SampleDate	AnalyteAbbrev	Concentration
CP-E1	1/14/04	TCE	5.11
CP-E1	1/14/04	DCE	30.32
CP-E1	1/14/04	TCE	5.21
CP-E1	1/14/04	DCE	29.4
CP-E2	1/14/04	DCE	98
CP-E2	1/14/04	TCE	114.4
CP-E3	1/14/04	DCE	14.28
CP-W2	1/14/04	DCE	17.2
CP-W3	1/14/04	TCE	14.76
CP-W3	1/14/04	DCE	26.84
IN20-11	1/14/04	TCE	6.19
IN20-11	1/14/04	DCE	20.18
IN20-11	1/14/04	TCE	5.99
IN20-11	1/14/04	DCE	19.76
IN20-11	2/11/04	DCE	15.9
IN20-11	2/11/04	TCE	5.14
IN20-11	2/11/04	DCE	15.1
IN20-11	3/10/04	TCE	5.1
IN20-11	3/10/04	DCE	16.7
IN20-11	3/10/04	TCE	5.15
IN20-11	3/10/04	DCE	15.9



**Table 2-4 Domestic Well Sampling Results for the Reporting Period**

StationID	Aquifer	SampleDate	LastName	TCA	DCA	DCE	MC	PCE	TCE
1073G-1	lower	1/12/04	(b) (6)	ND	ND	ND	ND	ND	ND
1073J-1	lower	1/13/04		4.31	ND	ND	ND	ND	ND
1573H-1	lower	1/13/04		ND	ND	ND	ND	ND	ND
0273C-4	lower	2/10/04		ND	ND	ND	ND	ND	ND
0273D-6	lower	2/10/04		ND	ND	ND	ND	ND	ND
1073J-2	lower	2/10/04		0.8	ND	ND	ND	ND	ND
1473D-1	lower	2/10/04		ND	ND	ND	ND	ND	ND
1073L-4	lower	3/8/04		ND	ND	ND	ND	ND	ND
1073Q-4	lower	3/8/04	NORTH MEADOWS WATER	0.84	ND	ND	ND	ND	ND
1573C-17	lower	3/8/04	(b) (6)	ND	ND	ND	ND	ND	ND
0373A-2	lower	3/10/04		1.68	ND	ND	ND	ND	ND
1473C-3	lower	3/10/04		ND	ND	ND	ND	ND	ND
1073D-2	upper	1/12/04	North Glen Water Assoc.	5.79	3.58	1.57	ND	ND	ND
1073E-2	upper	1/12/04	(b) (6)	ND	ND	ND	ND	ND	ND
1073P-1	upper	1/12/04		ND	ND	ND	ND	ND	ND
1473M-1	upper	1/12/04		ND	ND	ND	ND	ND	ND
1573Q-1	upper	1/12/04		ND	ND	ND	ND	ND	ND
0373L-1	upper	2/10/04		ND	ND	ND	ND	ND	ND
1073D-1	upper	2/10/04		4.4	1.42	ND	ND	ND	ND
1073P-2	upper	2/10/04		ND	ND	ND	ND	ND	ND
1573C-8	upper	2/10/04		ND	ND	ND	ND	ND	ND
1573R-1	upper	2/10/04		ND	ND	ND	ND	ND	ND
1073L-1	upper	3/9/04		ND	ND	ND	ND	ND	ND
1073L-2	upper	3/9/04		ND	ND	ND	ND	ND	ND
1073M-1	upper	3/9/04		ND	ND	ND	ND	ND	ND

Figure 2-7 South System Extraction Wells TCA, DCA and DCE Concentrations

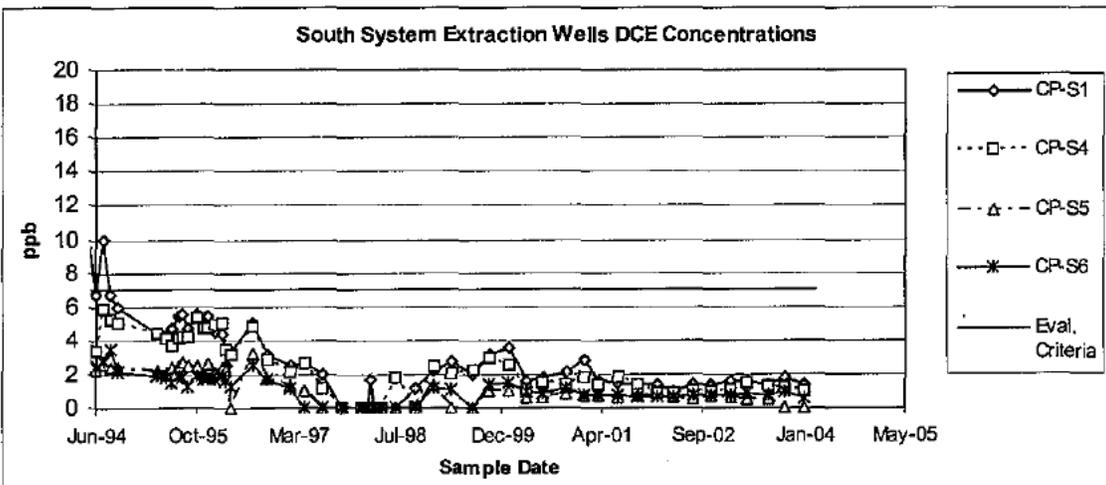
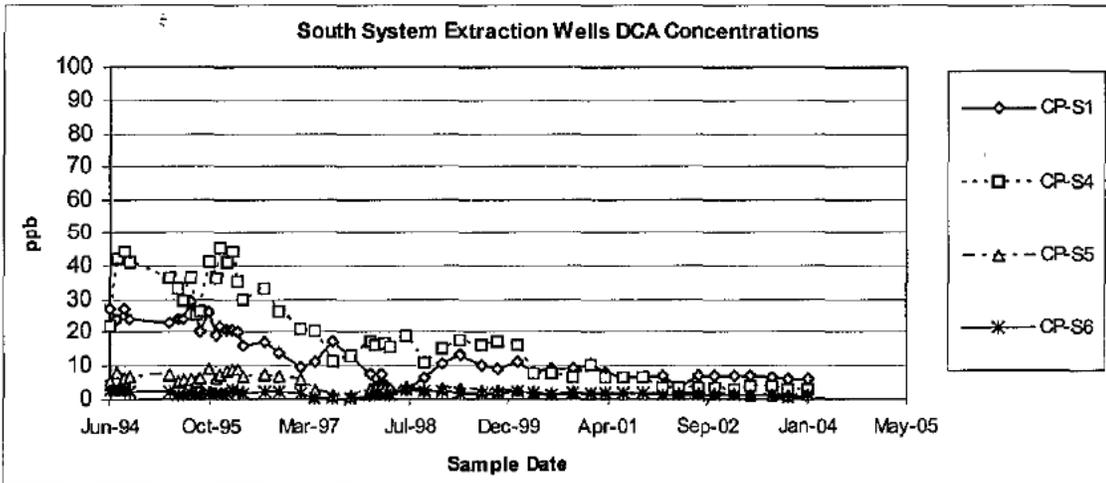
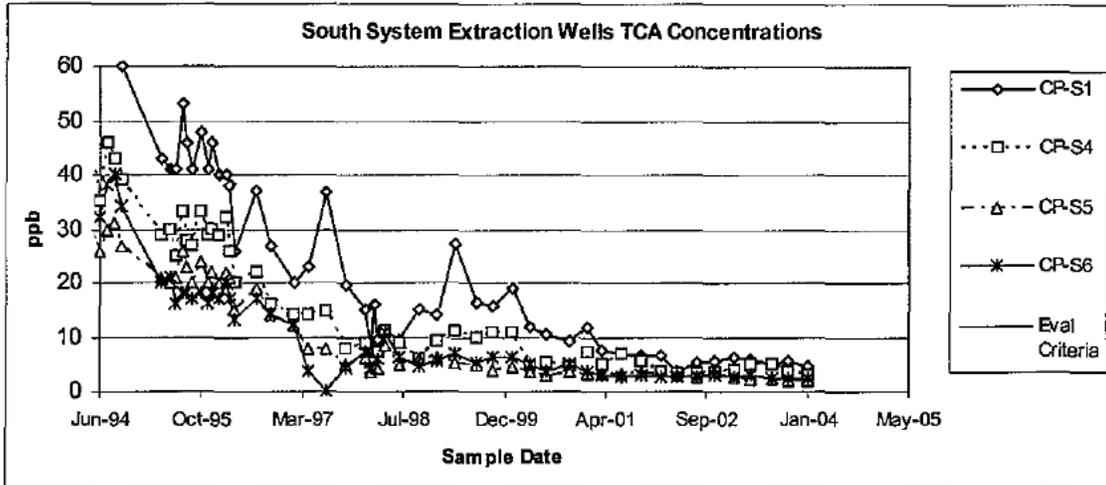


Figure 2-8 South System Extraction Wells TCE, PCE and MC Concentrations

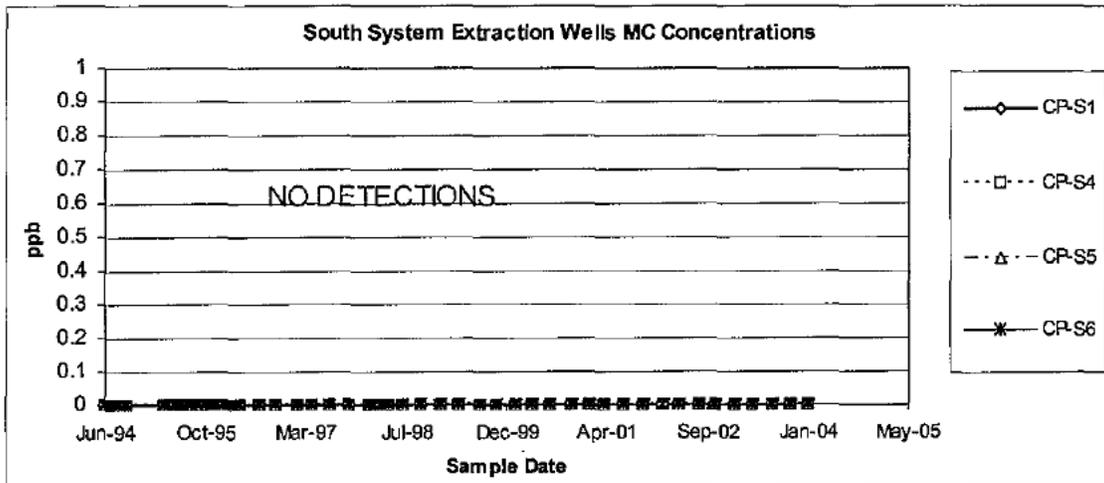
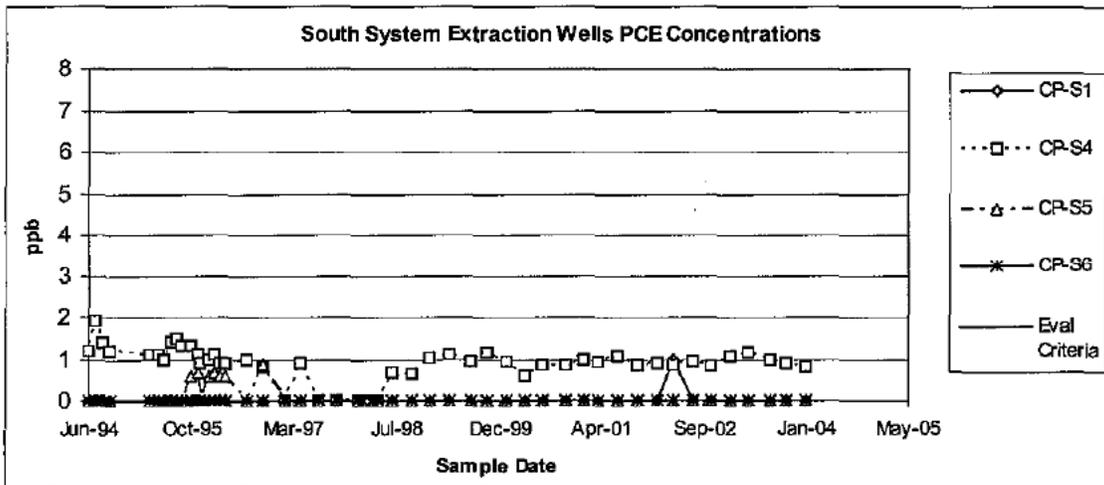
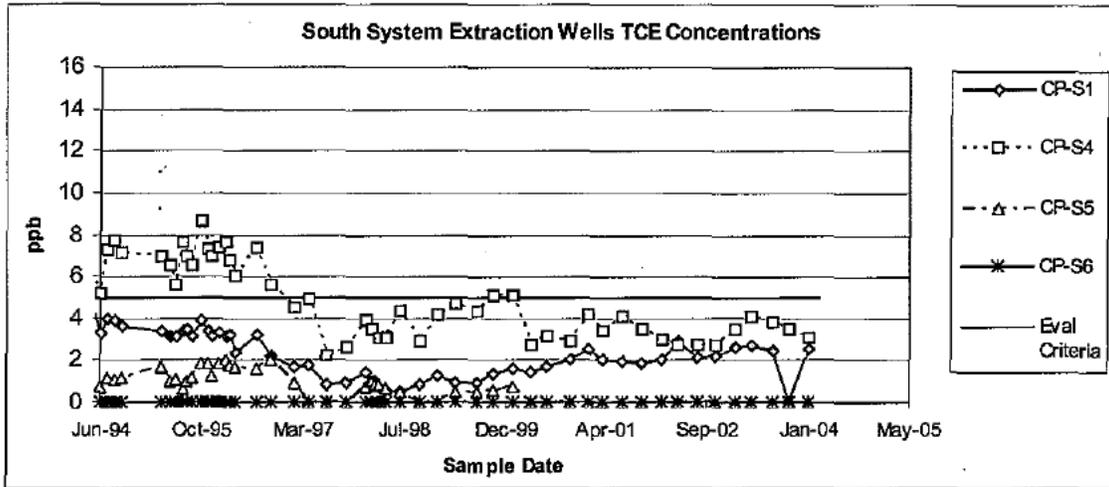


Figure 2-9 Upper Aquifer Compliance and Domestic Well Constituents

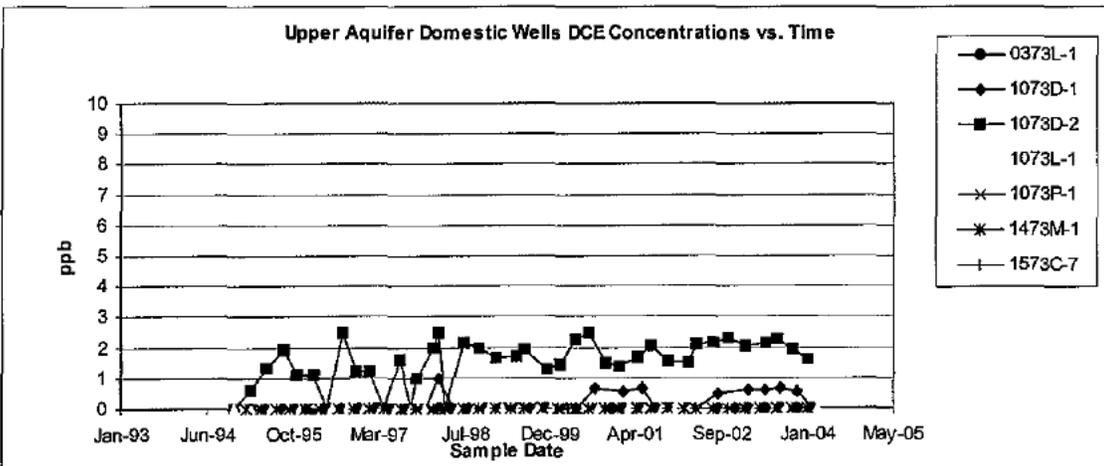
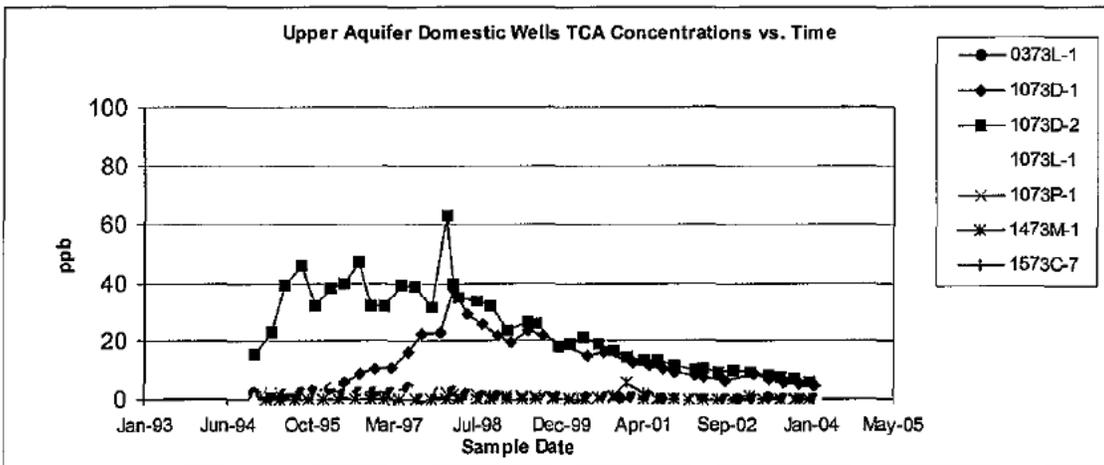
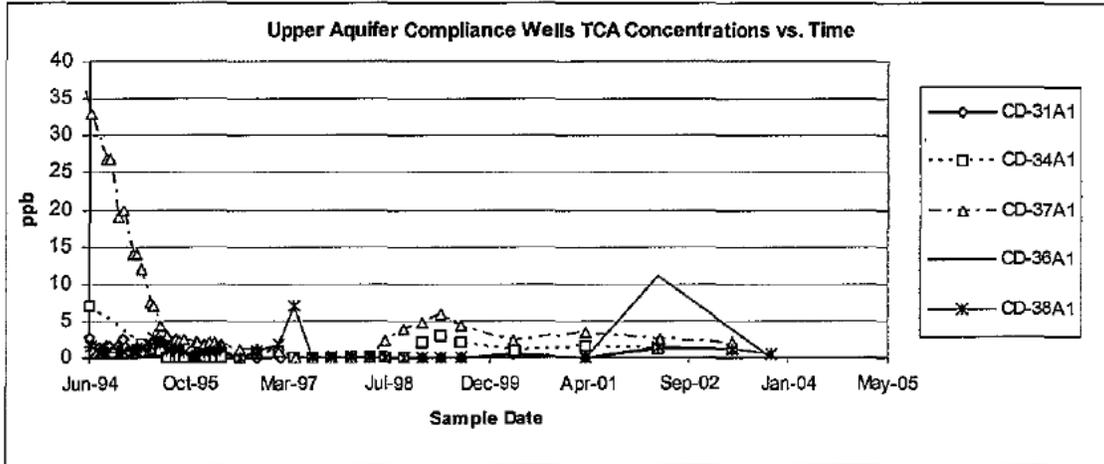




Figure 2-11 West System Extraction Wells TCA, DCA and DCE Concentrations

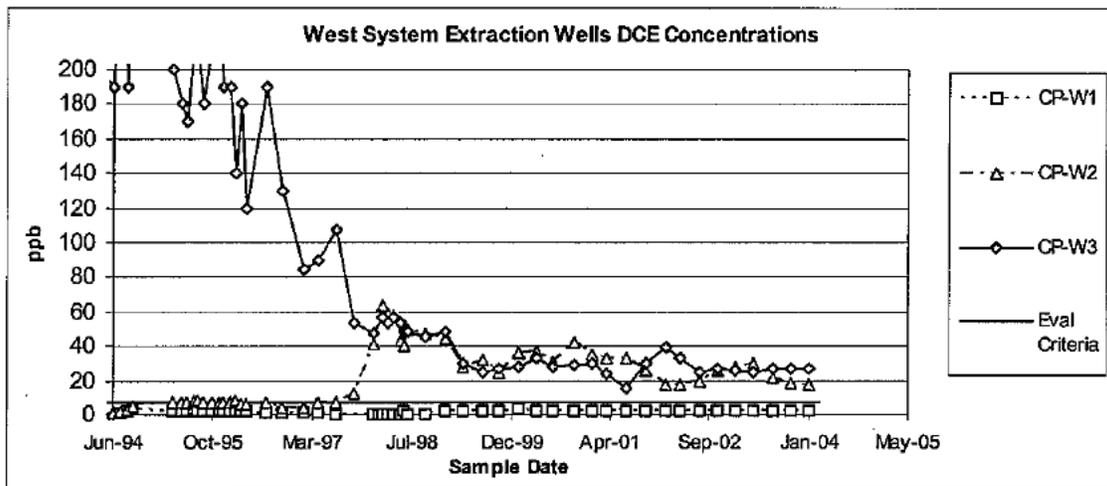
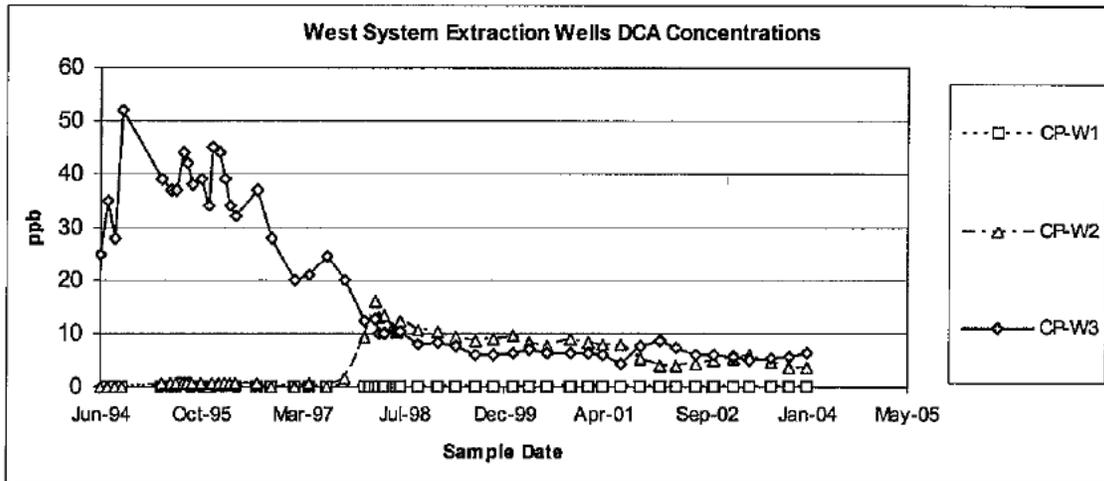
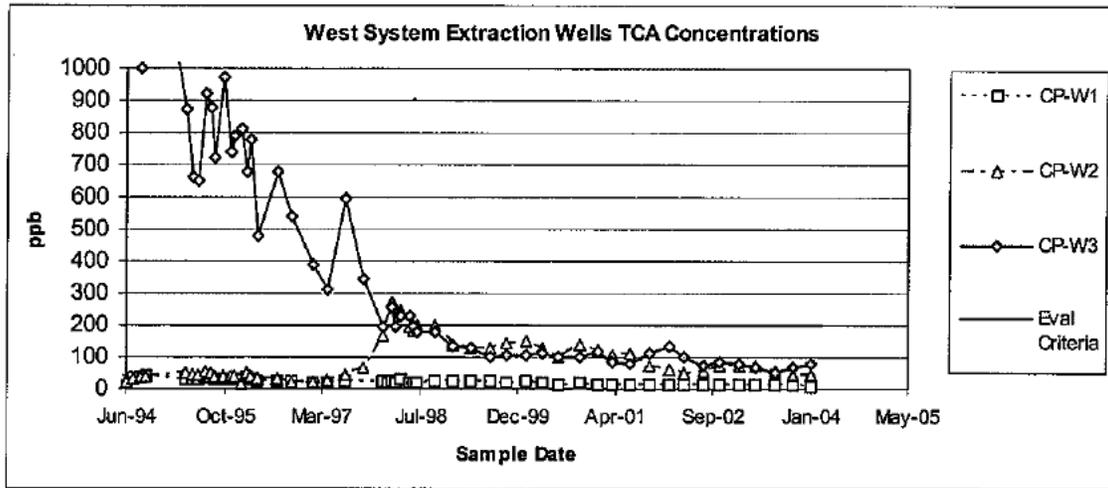


Figure 2-12 West System Extraction Wells TCE, PCE and MC Concentrations

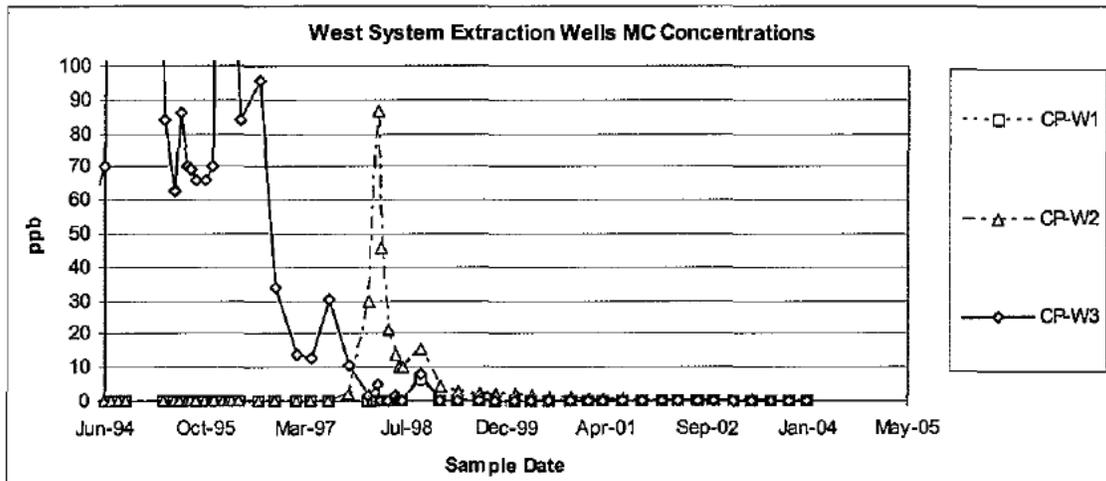
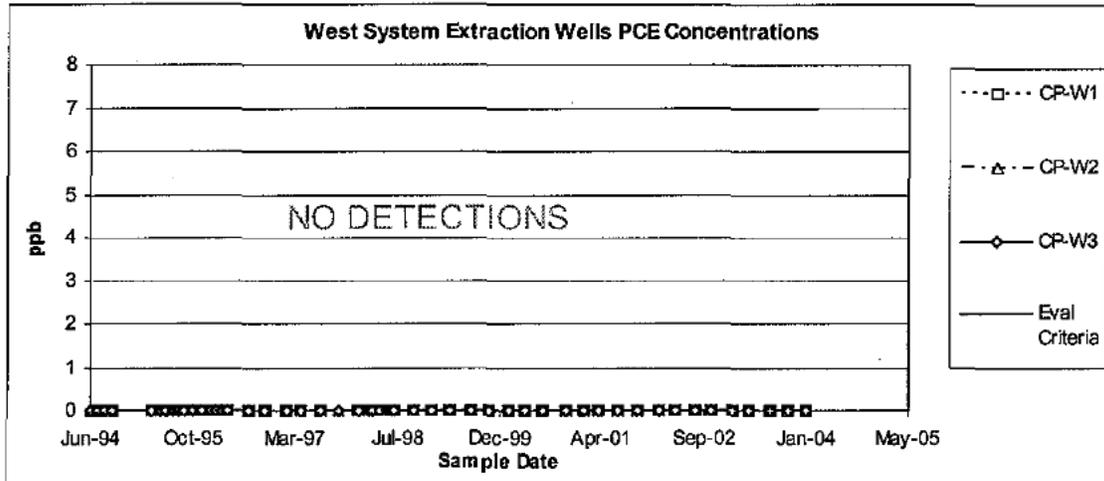
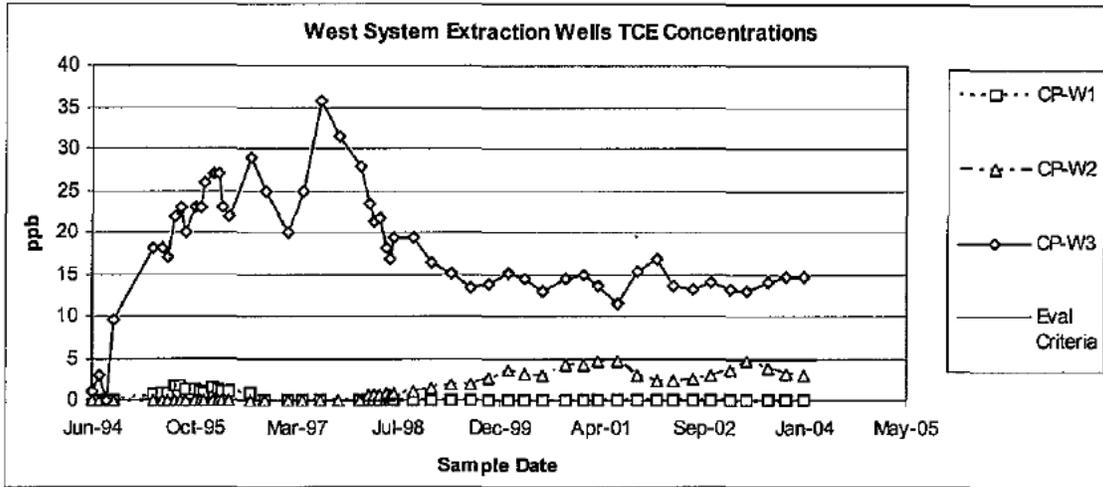


Figure 2-13 East System Extraction Wells TCA, DCA and DCE Concentrations

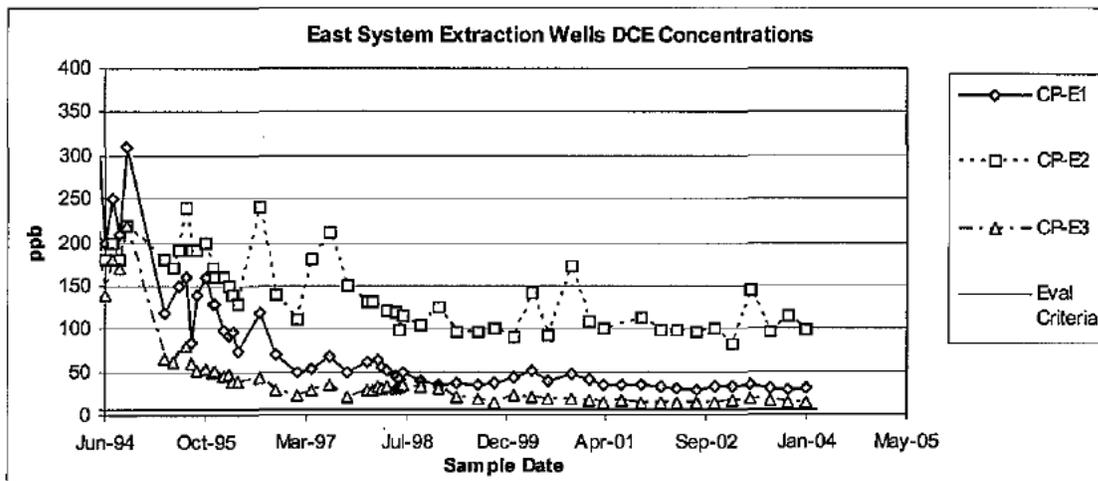
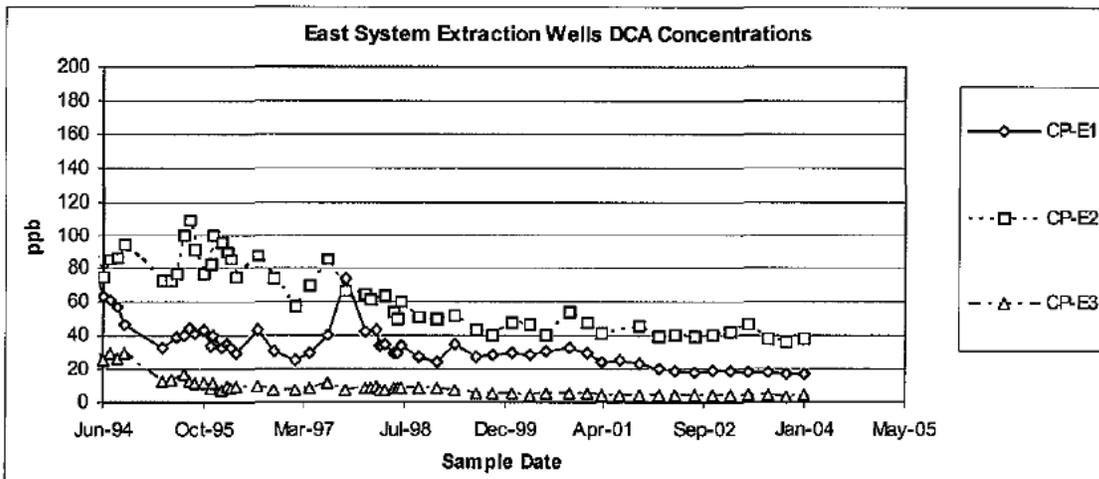
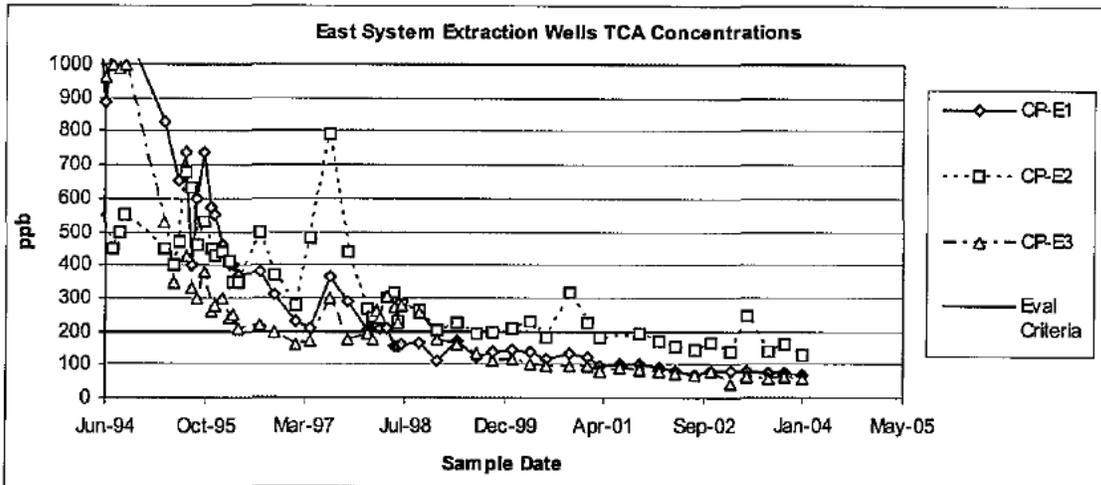
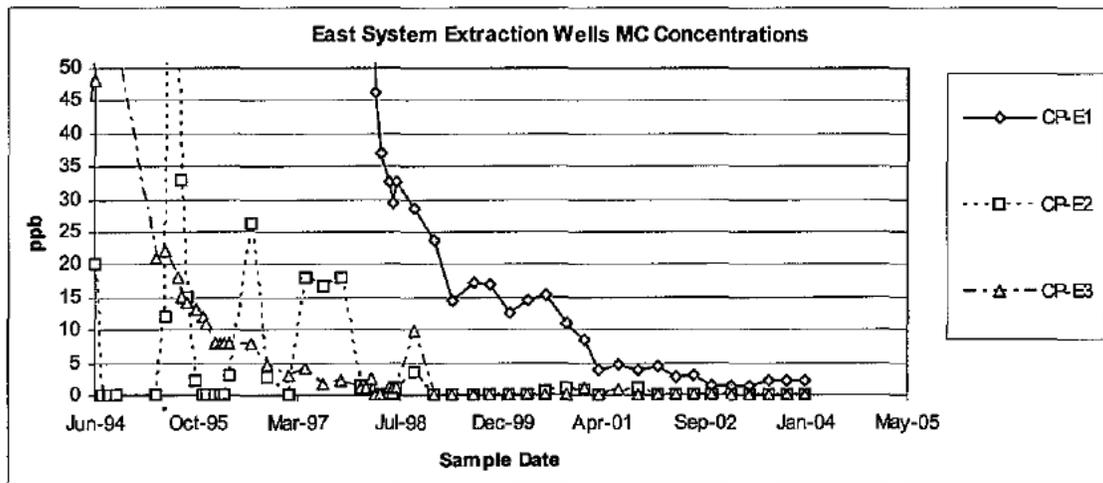
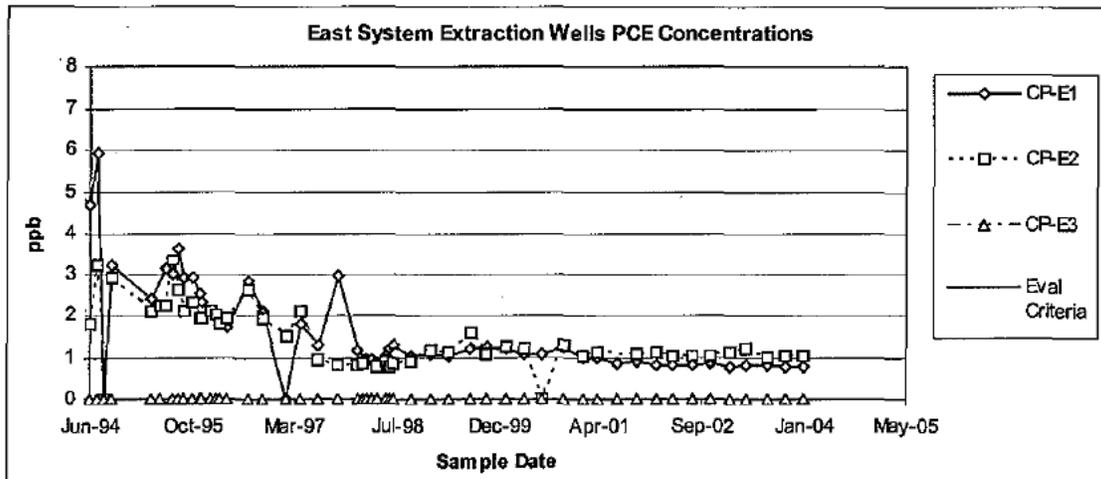
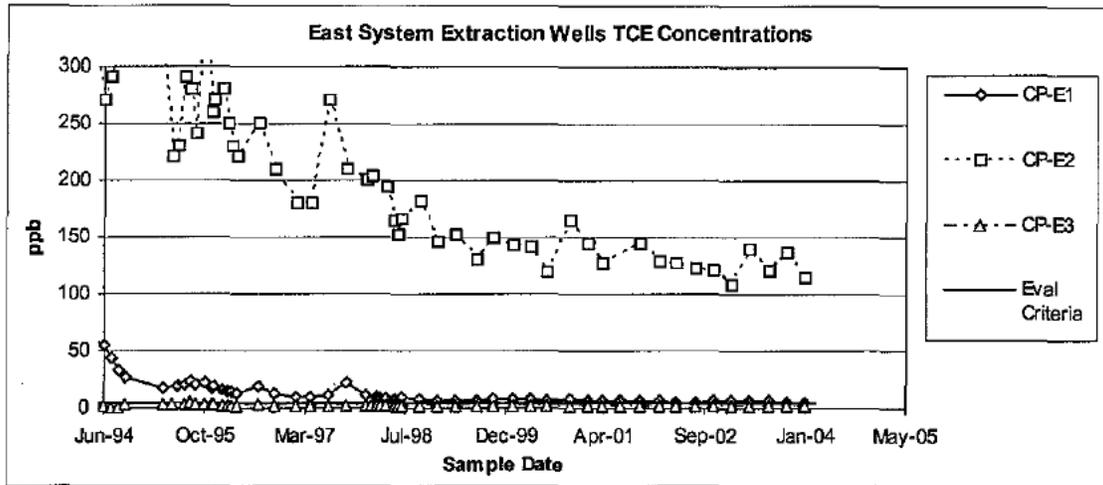
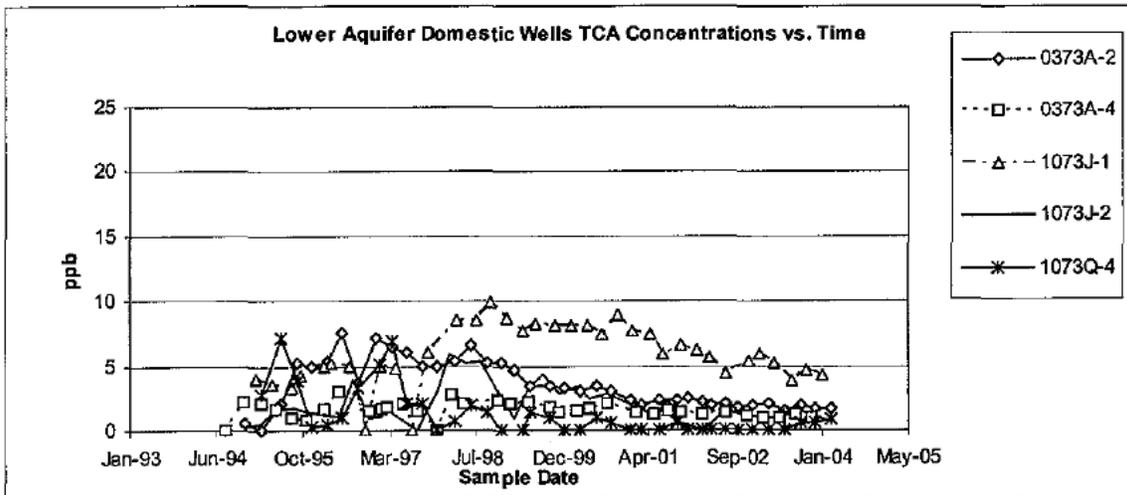
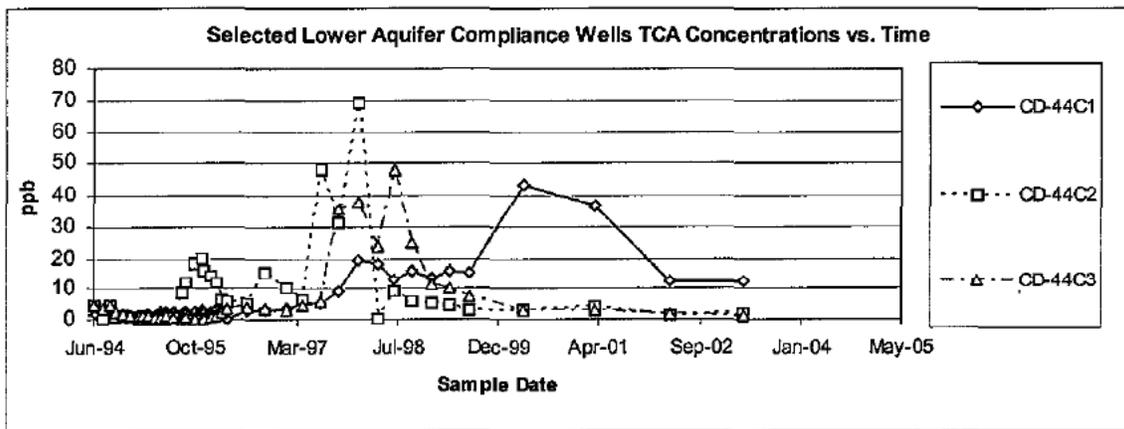
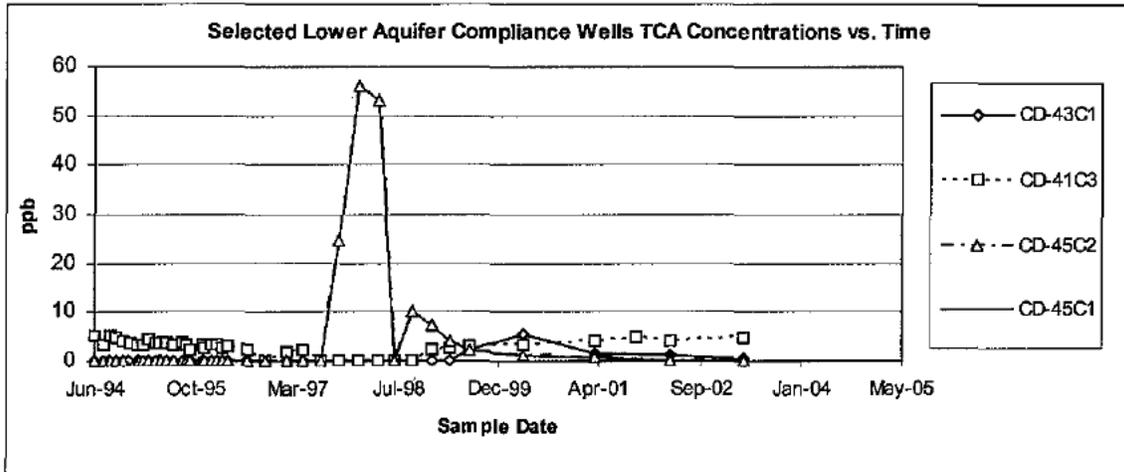
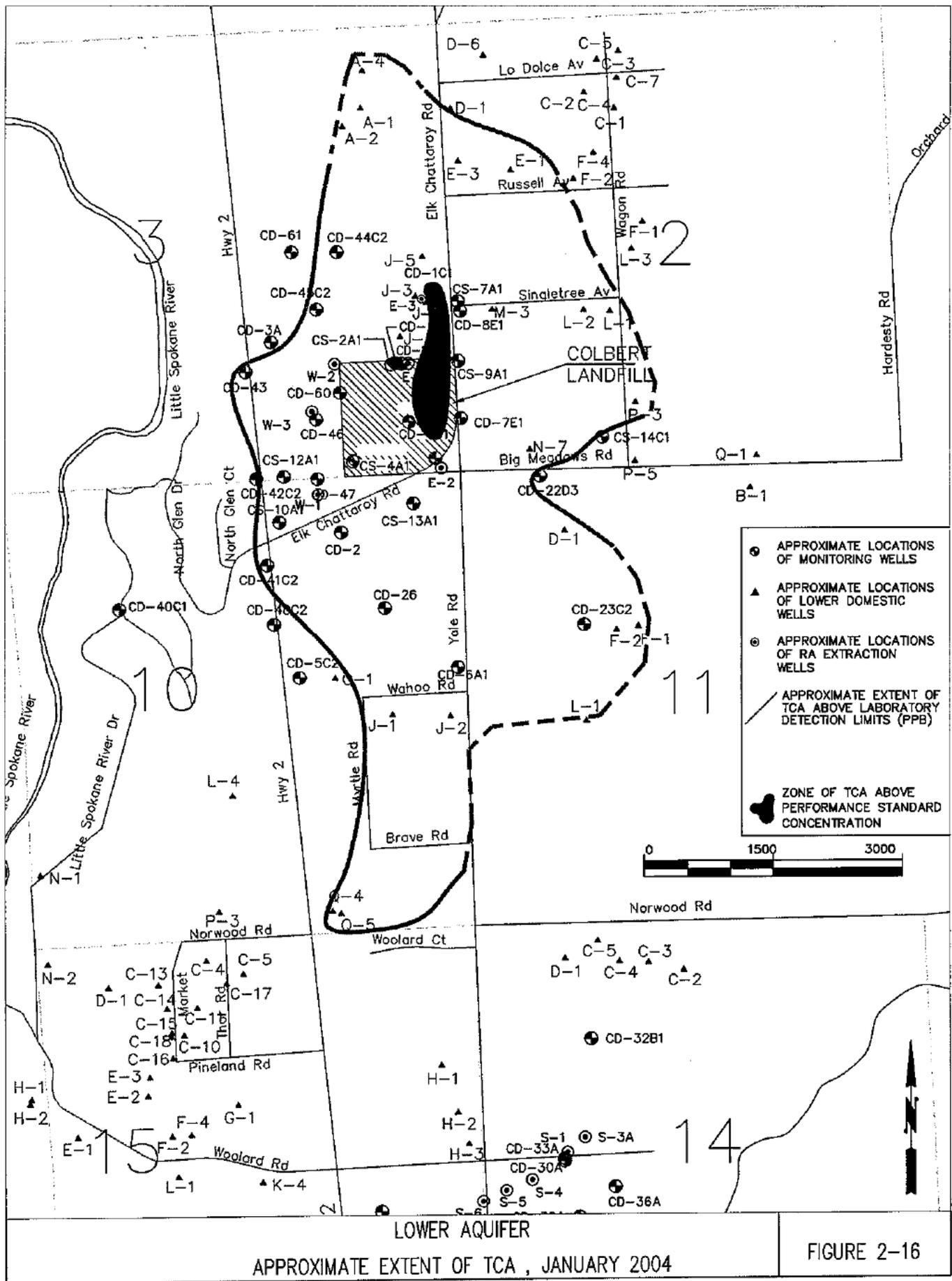


Figure 2-14 East System Extraction Wells TCE, PCE and MC Concentrations



**Figure 2-15 Lower Aquifer Compliance and Domestic Well Analyte Concentrations**





- APPROXIMATE LOCATIONS OF MONITORING WELLS
- ▲ APPROXIMATE LOCATIONS OF LOWER DOMESTIC WELLS
- ⊙ APPROXIMATE LOCATIONS OF RA EXTRACTION WELLS
- APPROXIMATE EXTENT OF TCA ABOVE LABORATORY DETECTION LIMITS (PPB)
- ZONE OF TCA ABOVE PERFORMANCE STANDARD CONCENTRATION



Figure 2-17 Influent and Effluent Analyte Concentrations

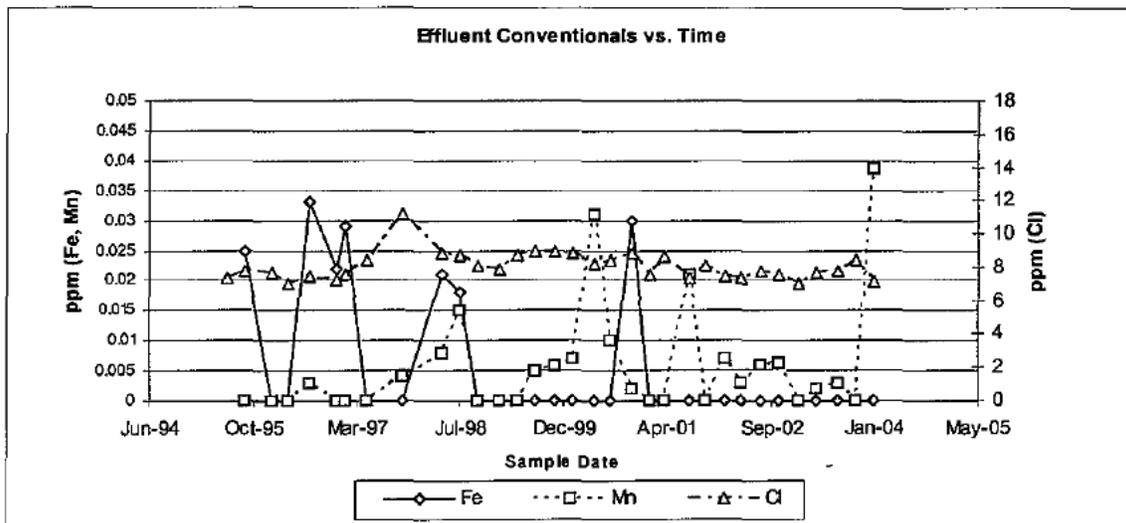
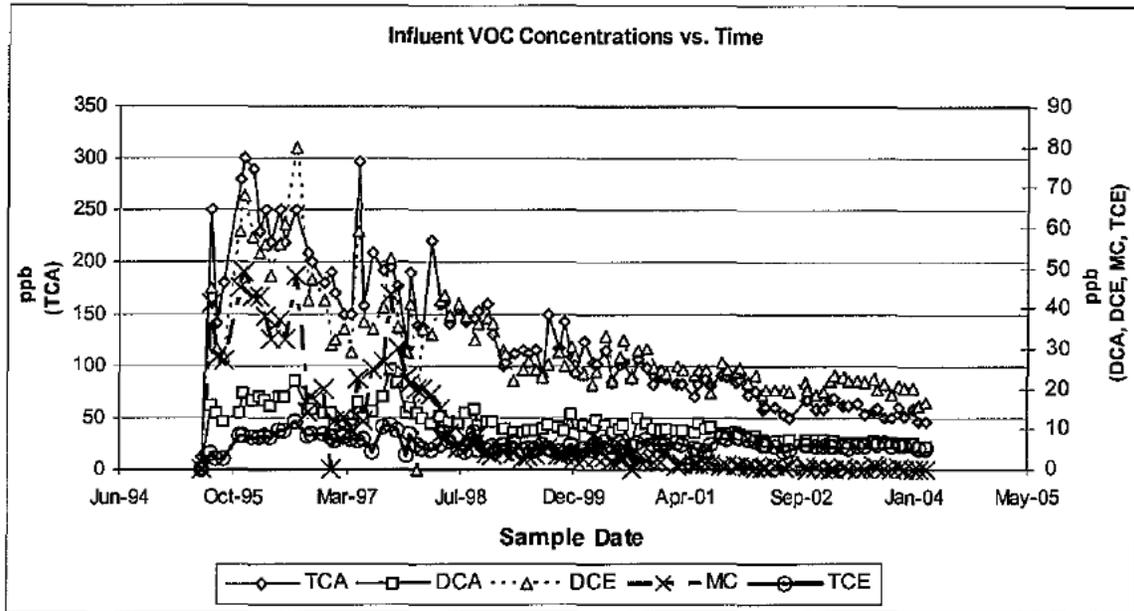
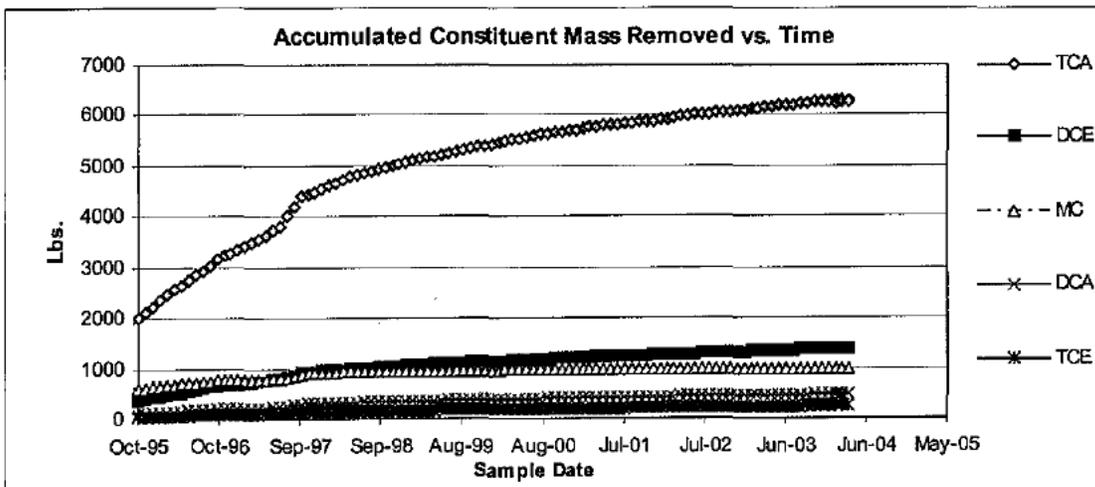
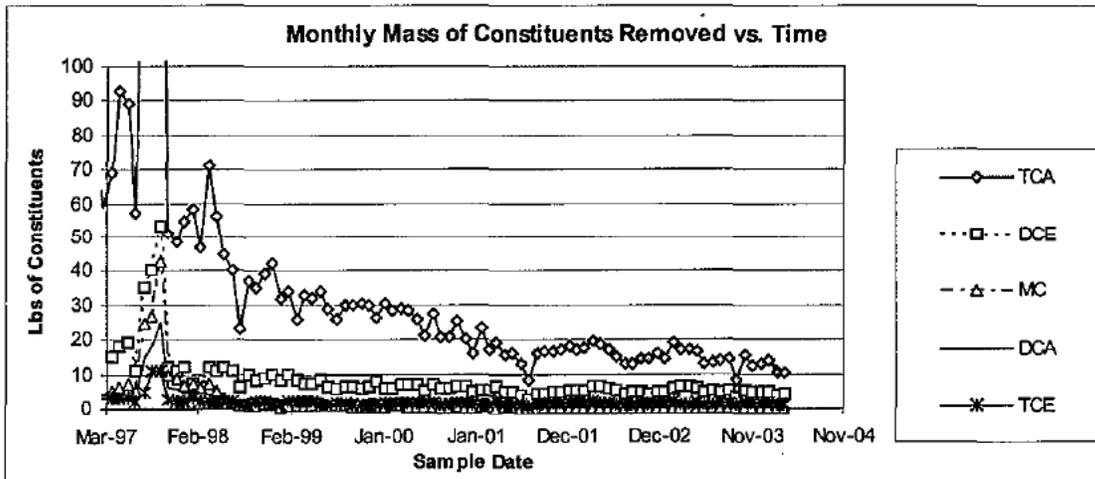
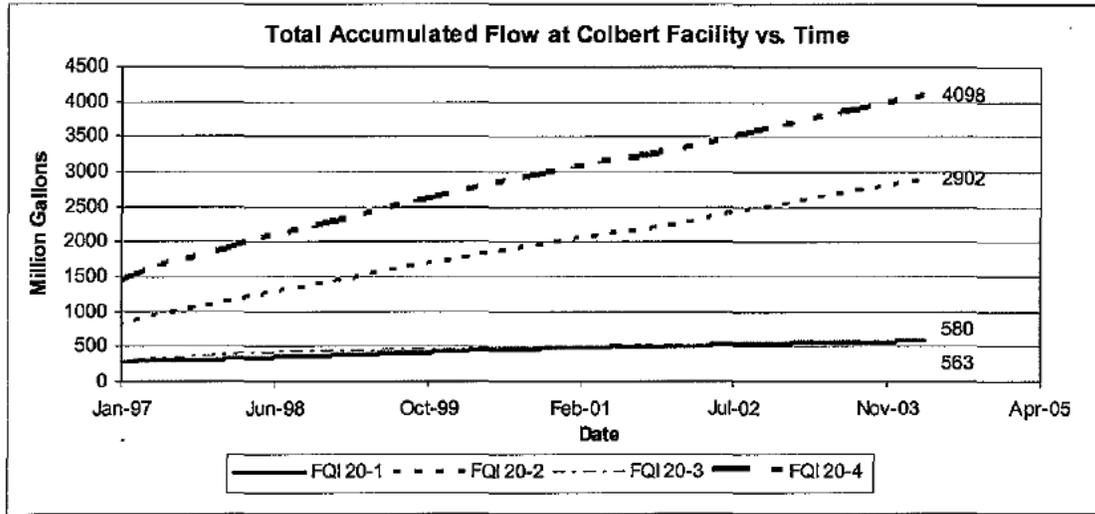
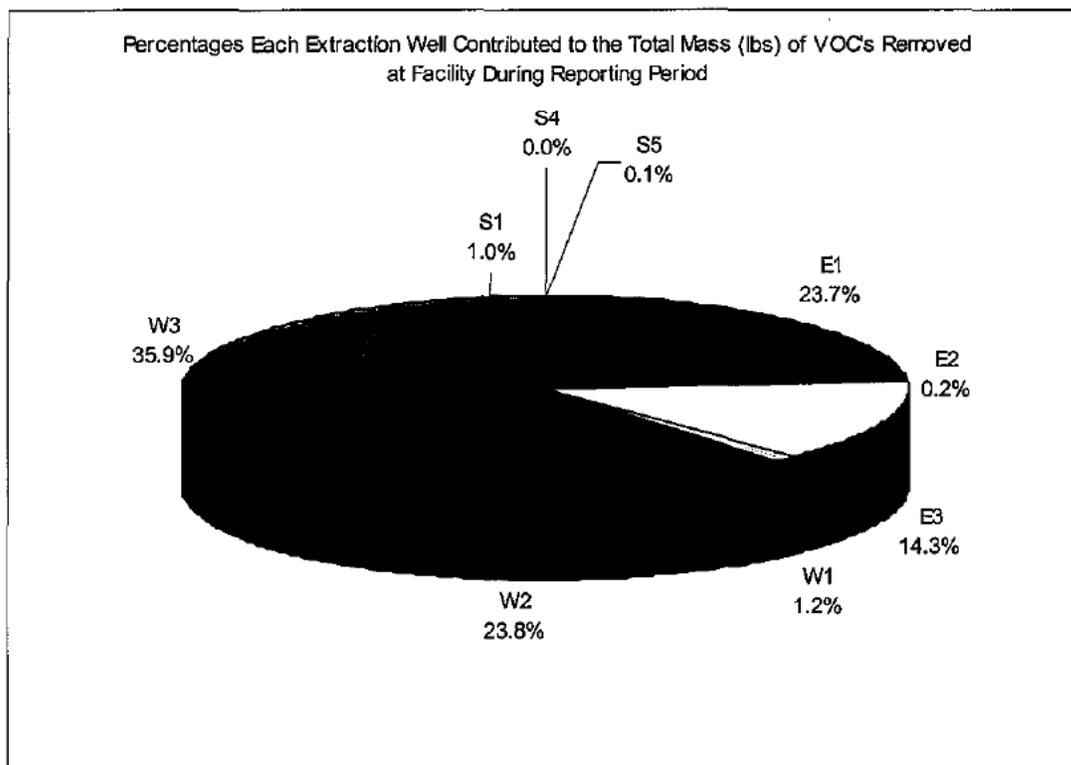
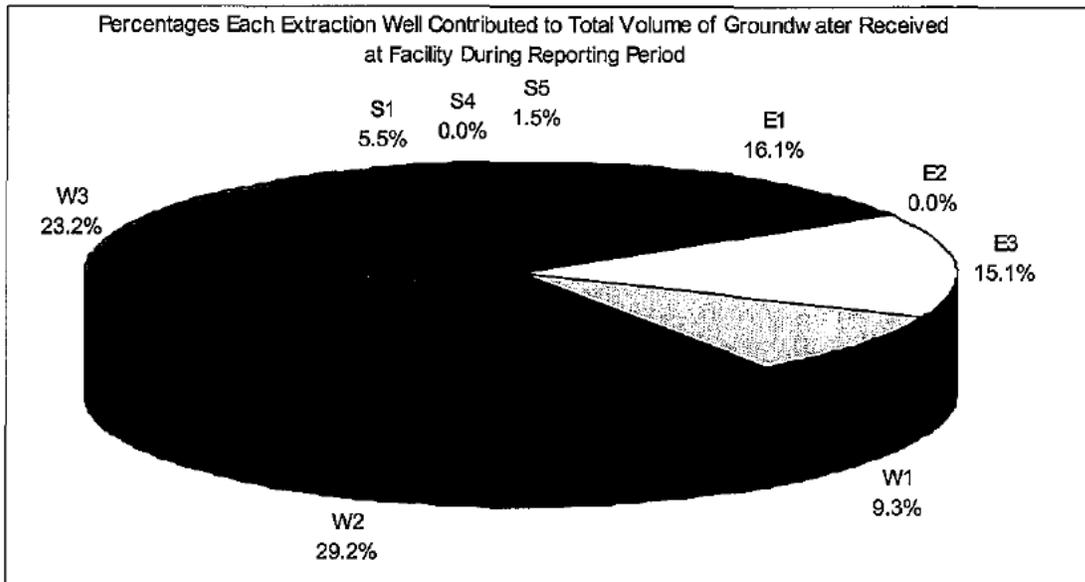


Figure 2-18 Facility Flow, Mass and Concentrations



**Figure 2-19 Volumes and Mass Removed from Extraction Wells**



## **2.2 PERFORMANCE ASSESSMENT**

### **2.2.1 UPPER AQUIFER**

South system extraction well CP-S4 had a TCE concentration just below the adjustment control criteria during this reporting period.

The general direction of groundwater flow in the upper aquifer is south. Groundwater elevation contours and flow lines indicate capture is being achieved in the upper aquifer in the area of the active extraction wells.

### **2.2.2 LOWER AQUIFER**

Lower aquifer compliance monitoring wells and domestic wells continue to exhibit constituent of concern concentrations below performance criteria. Groundwater elevation contours and flow lines indicate capture is being achieved in the lower aquifer in the area surrounding the landfill.

### **2.2.3 ACTIONS TAKEN**

Per conditions set forth in the consent decree (Appendix B, page V-7), the south system extraction wells are not required to be in operation. However, the concentration of TCE in CP-S4 is just below the adjustment control criteria and this well will be kept in operation into the next reporting period. Concentrations will be observed during the annual sampling round (April 2004) before further operation decisions are made.

No other actions or adjustments resulting from performance data were made during this reporting period.

### **3.1 OPERATIONAL DATA**

#### **3.1.1 FACILITY**

The operational data summary for the facility can be found in Table 3-1. The facility averaged 21.4 hours per day on line for the reporting period. Volume of water treated through the system was approximately 78.8 million gallons, a -13.5 percent difference from last quarter. The air to water ratio averaged 117.9 for the quarter. Approximately 159 gallons of scale prevention chemical was used during this quarter at an average rate of 7.5 mls/1000 gallons. Flow error percentages for each influent trunk line were less than 4%. Daily data collection time averaged 99.99 percent.

#### **3.1.2 WELLS**

The operational data summary for the extraction wells is presented in Table 3-2. Time on line for all operating extraction wells was greater than 70 percent. Flow rates in all extraction wells were consistent during this reporting period (Figure 3-2). Extraction well specific capacities are presented in Figure 3-2.

### **3.2 OPERATIONAL ASSESSMENT, PROBLEMS AND ADJUSTMENTS**

#### **3.2.1 FACILITY**

The following problems or adjustments were present during this reporting period:

- On January 2, the facility was shutdown due to extreme subzero temperatures. Start-up was performed on January 8. Although heat traced, the tower pressure transmitters collected anomalous data for this period of time.
- A brief power outage caused a system shutdown on 2/10.
- The plant shutdown on 2/16 due to sump control problems.
- Sump liners were repaired during the first half of March, which resulted in a few operator initiated shutdowns.

#### **3.2.2 WELLS**

The following problems and/or adjustments were present during this reporting period:

- The pressure gauge at CP-S4 began experiencing problems during this quarter. The gauge has been replaced.
- On 2/11, the south system wells began experiencing incoming power problems. This was corrected during the following week.

**Table 3-1 Colbert Treatment Facility Operational Data Sheet**

Reporting Period: 1st Quarter 2004

<b>INFLUENT SYSTEM (20)</b>				
Flow Rate (gpm)	FI 20-1	FI 20-2	FI 20-3	FI 20-4
Min	0.0	0.0	0.0	0.0
Max	69.7	581.5	56.4	707.5
Avg	55.8	504.2	41.1	601.2
Flow Rate (MGD)				
Min	0.0	0.0	0.0	0.0
Max	0.1	0.8	0.1	1.0
Avg	0.1	0.7	0.1	0.9
Accumulated Flow (kgal)				(MGD)
1st Quarter 2004	7316.3	66076.2	5391.8	78.8
Change from last quarter (% Diff)	-26.4	-8.5	-56.4	-13.5
Year to Date	7316.3	66076.2	5391.8	78.8
Flow Error %				
Min	-2.06	-1.72	-2.06	
Max	1.00	0.66	1.00	
Avg	0.09	0.08	-0.24	
Pressure	FIT 20-1			
Min	0.1			
max	27.2			
Avg	24.4			

<b>BYPASS SYSTEM (21)</b>	
Flow Rate (gpm)	FE 21-1
Min	0.0
Max	0.0
Avg	0.0
Flow Rate (MGD)	
Min	0.0
Max	0.0
Avg	0.0
Accumulated Flow (kgal)	
This Quarter	0.0
Change from last quarter (% Diff)	0.0
Year to Date	0.0
Flow Error %	
Min	0.0
Max	0.0
Avg	0.0
Pressure	FIT 21-1
Min	0.0
max	1.1
Avg	0.9

<b>SUMP SYSTEM (28)</b>	Pumps		Exhaust fan	
	Batch P28-1	Airstripper P28-2	Building P28-3	EF28-1
Time On-Line				
Avg hours per day	0	0	0	0
Quarterly total	18.7	53	144	24
Year to Date	34.2	121.4	727.7	235.3
Temperature (deg. F)	TT28-1		TT28-2	
Min	31.8	41.4		
Max	138.0	51.3		
Avg	45.4	46.1		

<b>SCALE CHEMICAL SYSTEM (22)</b>		
	Feed pumps	
	P22-1	P22-2
Time On-Line		
Avg hours per day	21.7	0.5
Quarterly total	1978.3	45.6
Year to Date	1978.3	45.6
Level (ft)	Tank T-1	
Min	1.2	
Max	5.1	
Avg	3.5	
Avg Feed Rate	7.5	(mts/kgal)
Volume Used	159	(gallons)

**Colbert Treatment Facility Operational Data Sheet (continued)**

<b>AIRSTRIPPING SYSTEM (24)</b>								
Pressure		Filter	Fan	Tower		pH	pH 1	pH 2
		DP24-1	PT24-2	PT24-2			AE24-1	AE24-2
	Min	0.0	0.1	-29.6		Min	7.19	7.11
	Max	0.6	0.8	0.6		Max	9.48	8.09
	Avg	0.0	0.7	-0.7		Avg	7.41	7.23
Fan		Fan Flow (cfm)	Air/Water	VFD Speed (%)	Time Online (hrs)	ClearWell	Temp (F)	Level (ft)
	Min	6824.1	94.0	26.9	0.0			
	Max	9564.0	135.3	33.8	24.0	Min	0.2	0.7
	Avg	8067.0	117.9	29.9	21.4	Max	51.4	1.0
Accum Flow (MCF)					Avg	47.6	1.0	
	this quarter	1121.0			1942.9			
	Year to Date	1121.0			1942.9			

Data Collection Time	(% Day)
Min	99.51
Max	100.00
Avg	99.99

**Table 3-2 Colbert Treatment Facility Extraction Wells Operational Data Sheet**

	South System			West System			East System			
	CP-S1	CP-S4	CP-S5	CP-S6	CP-W1	CP-W2	CP-W3	CP-E1	CP-E2	CP-E3
Water Level Above Pump (ft)										
Min	7.93	3.54	8.10	9.30	83.90	41.60	43.75	23.70	5.00	17.64
Max	15.80	10.00	10.20	9.40	85.91	47.10	46.40	33.00	12.44	22.84
Avg	10.15	5.24	8.60	9.31	84.42	42.18	44.23	24.71	5.49	18.51
Groundwater Elevation										
Min	1752.59	1753.13	1758.65	1760.05	1666.99	1658.23	1666.54	1660.10	1690.92	1663.15
Max	1760.46	1759.59	1760.75	1760.15	1669.00	1663.73	1669.19	1669.40	1698.36	1668.35
Avg	1754.81	1754.83	1759.15	1760.06	1667.51	1658.81	1667.02	1661.11	1691.41	1664.02
Flow (gpm)										
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	25.00	4.96	28.36	0.00	69.42	169.82	173.66	125.14	2.19	119.01
Avg	18.98	1.73	20.39	0.00	55.60	144.25	154.26	105.35	0.94	104.60
Accumulated Flow (kgal)										
This Quarter	5.30	0.00	1.42	0.00	8.90	28.00	22.27	15.44	0.04	14.51
Diff from last quarter (%)	-50.9	-12.0	0.0	0.0	9.4	-16.4	21.0	18.5	40.0	-8.9
Year To Date										
Total	11.40	2.32	3.36	0.00	48.78	62.56	44.95	46.54	0.46	51.65
Specific Capacity										
Min	-15.74	0.00	-25.4	0.00	0.0	0.00	-471	0	0.00	0.00
Max	14.67	13.26	156.08	0.00	2033.16	21.82	320.74	356	0.09	54.35
Avg	2.96	0.74	17.54	0.00	63.69	13.69	72.94	17.67	0.04	19.34
Pressure										
Min	5.00	0.00	2.00	0.00	4.00	1.00	5.00	0.00	0.00	0.00
Max	32.95	86.22	30.10	29.07	33.87	35.90	36.22	31.54	25.00	31.00
Avg	29.87	19.82	27.52	13.29	30.02	31.25	32.58	27.57	22.24	27.53
VFD Speed (%)										
Min	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	55.00	64.00	100.00	2.49	84.00	86.78	82.00	94.00	71.04	80.00
Avg	41.77	47.17	65.20	0.03	67.38	75.92	72.85	81.43	60.62	70.32
Time On-Line										
% of quarter	73.13	71.06	71.59	0.00	77.30	85.31	85.23	85.32	85.18	84.31

Figure 3-1 Extraction Well Flow Rates

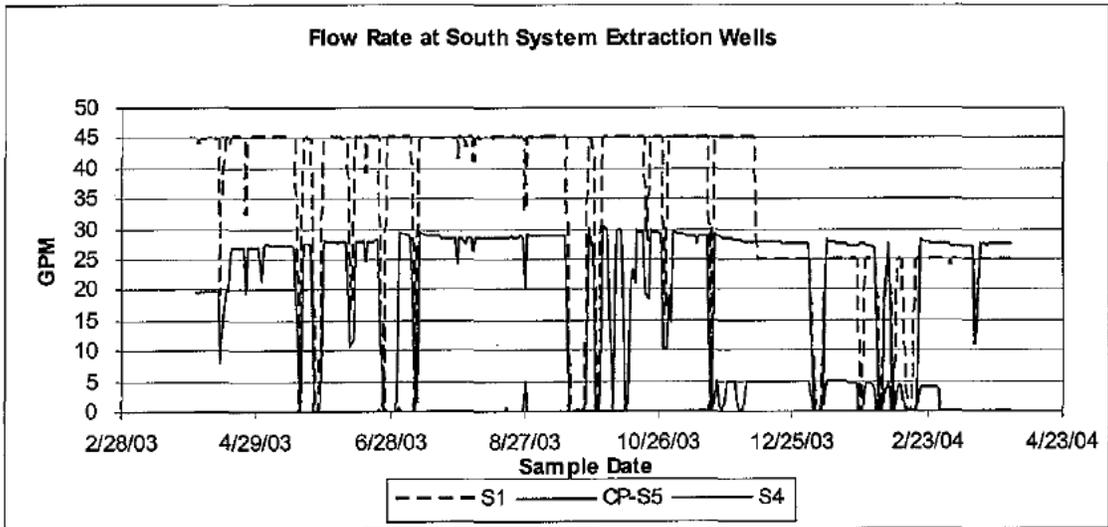
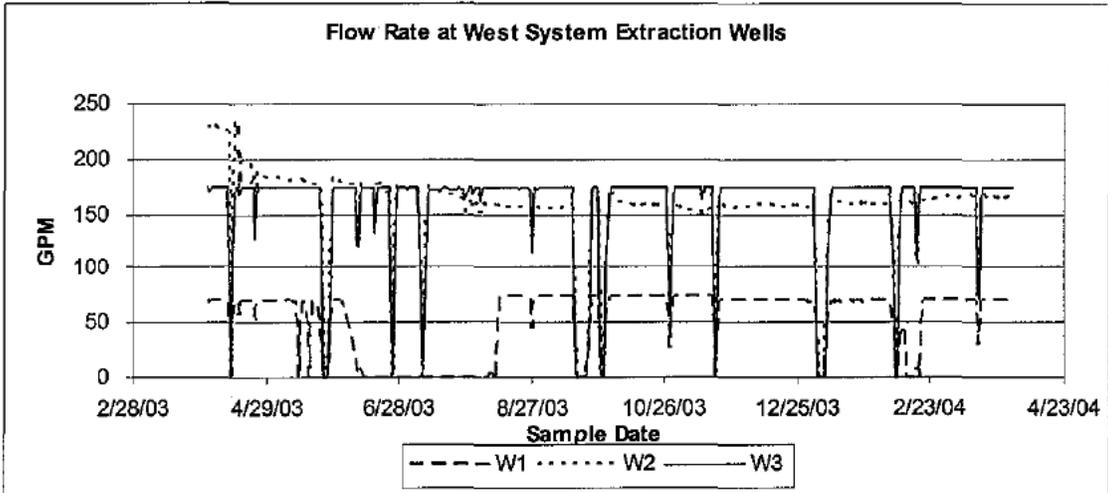
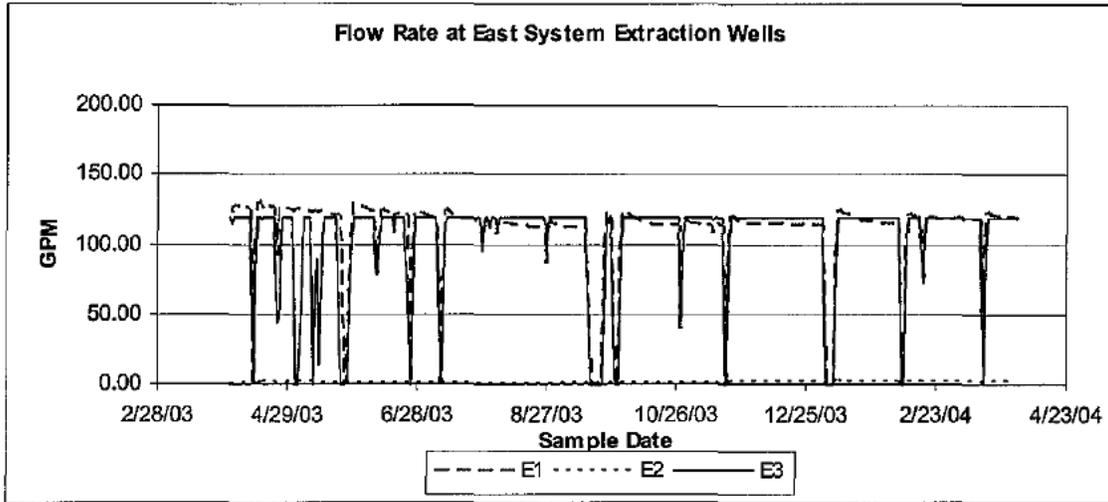


Figure 3-2 Extraction Well Specific Capacities

